

# Response to 83 Illinois Administrative Code 411 – 2002 Annual Report May 29, 2003



Subpart B: Requirements for all Jurisdictional Entities	1
Introduction	1
IP's Commitment	1
IP's Reliability Indices	3
Interruption Data	6
Comparative Data	8
Customer Satisfaction	10
Worst Performing Circuit Patrols	12
Lightning Analysis	14
Technology	14
Vegetation Management	16
Emergency Response	16
Substation	17
Animal Protection	17
New Products Team	18
System Security	18
Damage Prevention	19
Format of Report	19
Summary	19
Section 411.20 Definitions	20
Worst Performing Circuits Definition	20
ICC Indices Definition	21
Urban and Rural	23
Section 411.100 Reliability Obligations	24
Section 411.110 Record-keeping Requirements	24
Section 411.120 Notice and Reporting Requirements	25
2002 Reliability Accomplishments	29
Substation Reliability Centered Maintenance	29
Capacity Planning	30
Forestry	30
Animal Protection	31
Circuit Patrols	31
Storm Restoration	31
Lightning	31
2003 Reliability Plan	
Substation RCM	
Capacity Planning	
Proactive Protective Device Coordination	



Forestry	33
Animal Protection	33
Circuit Patrols	33
Lightning	33
2004 Reliability Plan	34
2005 Reliability Plan	34
2006 Reliability Plan	35
Reliability Challenges	35
New Substation and Line Siting Challenges	35
Department of Transportation Ruling	36
Managing Community Relations	36
Ongoing Challenges	37
Exhibit 411.120.b.3.C	40
Exhibit 411.120.b.3.D	41
Exhibit 411.120.b.3.E	42
Exhibit 411.120.b.3.F	43
Exhibit 411.120.b.3.G	44
Customer Satisfaction Survey Results	47
Customer Complaints	53
2002 Customer Complaint Summary	53
2001 Customer Complaint Summary	56
2000 Customer Complaint Summary	58
1999 Customer Complaint Summary	60
Exhibit 411.120.b.3.H	61
Exhibit 411.120.b.3.I	62
2002 Worst Performing Circuits	62
2002 Worst Performing Circuit Detail	64
Belleville 124 – 2002 WPC	65
Belleville 132 – 2002 WPC	66
Belleville 163 – 2002 WPC	67
Belleville 268 – 2002 WPC	69
Bloomington 134 – 2002 WPC	70
Bloomington 204 – 2002 WPC	71
Bloomington 211 – 2002 WPC	72
Bloomington 217 – 2002 WPC	73
Champaign 142 – 2002 WPC	74
Danville 184 - 2002 WPC	75
Decatur 218 – 2002 WPC	76



Granite City 310 – 2002 WPC	77
Granite City 403 – 2002 WPC	78
Hillsboro 850 – 2002 WPC	79
Hillsboro 856 – 2002 WPC	80
Hillsboro 879 – 2002 WPC	81
LaSalle 510 – 2002 WPC	82
Maryville 380 – 2002 WPC	83
Mt. Vernon 128 – 2002 WPC	84
Sparta 935 – 2002 WPC	85
2001 Worst Performing Circuit Remediation	86
Belleville 101	86
Belleville 217	87
Belleville 242	87
Belleville 249	87
Belleville 298	87
Bloomington 240	87
Bloomington 256	88
Champaign 162	88
Champaign 311	88
Danville 121	88
Granite City 327	88
Granite City 329	88
Hillsboro 807	88
Hillsboro 855	88
Hillsboro 856	89
LaSalle 161	89
LaSalle 522	89
Maryville 384	89
Maryville 409	89
Mt. Vernon 101	89
Mt. Vemon 185	90
Sparta 923	90
2000 Worst Performing Circuit Remediation	90
Belleville 101	91
Belleville 105	91
Belleville 111	91
Belleville 114	91
Belleville 163	91



Belleville 253	91
Bloomington 211	92
Bloomington 215	92
Bloomington 217	92
Granite City 298	92
Granite City 322	92
Granite City 334	92
LaSalle 511	92
Maryville 360	93
Maryville 362	93
Maryville 368	93
Maryville 407	93
Mt. Vernon 140	93
Section 411.130 Interruption Cause Categories	96
Section 411.140 Reliability Review	97
Section 411.150 Modification or Exemption	100
Section 411.160 Format and Disclosure of Reports	101
Section 411.170 Exclusions	102
Section 411.180 System Protection	103
Section 411 190 Approval of Vegetation Management Programs	104



# **LIST OF FIGURES**

Figure 1 Asset Management Comprehensive Review Process	2
Figure 2 CAIDI YTD 2002 by Month	3
Figure 3 SAIFI 3-Year Summary	4
Figure 4 CAIFI 3-Year Summary	5
Figure 5 CAIDI 3-Year Summary	5
Figure 6 Customer Interruption Impact	6
Figure 7 All Events by Duration	7
Figure 8 All Events by Interruptions	7
Figure 9 Normalized SAIFI Data	9
Figure 10 Normalized CAIDI Data	9
Figure 11 Residential Customer Satisfaction Survey Results	11
Figure 12 Non-residential Customer Satisfaction Survey Results	11
Figure 13 Summary of WPC Performance for SAIFI	13
Figure 14 Summary of WPC Performance for CAIFI	13
Figure 15 Summary of WPC Performance for CAIDI	14
Figure 16 TOS Visual Basic View	15
Figure 17 Electronic Fence Inside Substation Fence	17
Figure 18 Plastic Sheathing Animal Protection on Pole	18
Figure 19 Distribution Circuit for WPC Calculation	20
Figure 20 Characterization of Distribution Circuits	23
Figure 21 Illinois Power's Service Territory	28
Figure 22 Residential Customer Satisfaction Survey Response to Q1-Q3	48
Figure 23 Non-Residential Customer Satisfaction Survey Response to Q1-Q3	48
Figure 24 Residential Customer Satisfaction Survey Response to Q4, Q5, Q7	49
Figure 25 Non-Residential Customer Satisfaction Survey Response to Q4, Q5, Q7	49
Figure 26 Residential Customer Satisfaction Survey Response to Q15-Q17	50
Figure 27 Non-Residential Customer Satisfaction Survey Response to Q15-Q17	50
Figure 28 Residential Customer Satisfaction Survey Response to Q27-Q29	51
Figure 29 Non-Residential Customer Satisfaction Survey Response to Q27-Q29	51
Figure 30 Residential Customer Satisfaction Survey Response to Q32	52
Figure 31 Non-Residential Customer Satisfaction Survey Response to Q32	52
Figure 32 Geographic Location 2002 Customer Complaints	55
Figure 33 2002 Belleville 124 Performance by Cause	65
Figure 34 2002 Belleville 132 Performance by Cause	66
Figure 35 2002 Belleville 163 Performance by Cause	67
Figure 36 2002 Belleville 268 Performance by Cause	69
Figure 37 2002 Bloomington 134 Performance by Cause	70
Figure 38 2002 Bloomington 204 Performance by Cause	71



# **LIST OF FIGURES**

Figure 39 2002 Bloomington 211 Performance by Cause	72
Figure 40 2002 Bloomington 217 Performance by Cause	73
Figure 41 2002 Champaign 142 Performance by Cause	74
Figure 42 2002 Danville 184 Performance by Cause	75
Figure 43 2002 Decatur 218 Performance by Cause	76
Figure 44 2002 Granite City 310 Performance by Cause	77
Figure 45 2002 Granite City 403 Performance by Cause	78
Figure 46 2002 Hillsboro 850 Performance by Cause	79
Figure 47 2002 Hillsboro 856 Performance by Cause	80
Figure 48 2002 Hillsboro 879 Performance by Cause	81
Figure 49 2002 LaSalle 510 Performance by Cause	82
Figure 50 2002 Maryville 380 Performance by Cause	83
Figure 51 2002 Mt. Vernon 128 Performance by Cause	84
Figure 52 2002 Sparta 935 Performance by Cause	85



# **LIST OF TABLES**

Table 1 Abnormal Days above Threshold using IEEE 2.5 Beta Method	8
Table 2 Worst Performing Circuit Cause Code Exclusions	21
Table 3 ICC Cause Code Exclusions	22
Table 4 Characterization of IP's Customer Base	27
Table 5 2003 Capital and O&M Planned Expenditures	32
Table 6 2004 Planned Capital and O&M Expenditures	34
Table 7 2005 Planned Capital and O&M Expenditures	34
Table 8 2006 Planned Capital and O&M Expenditures	35
Table 9 Identified Initiatives for 2003	37
Table 10 Identified Initiatives for 2002	39
Table 11 Exhibit 411.120.b.3.C	40
Table 12 Exhibit 411.120.b.3.D	41
Table 13 Exhibit 411.120.b.3.E	42
Table 14 Exhibit 411.120.b.e.F	43
Table 15 Transmission Equipment Average Age	44
Table 16 Distribution Equipment Average Age	44
Table 17 Transmission Construction and Maintenance	46
Table 18 Distribution Construction and Maintenance	46
Table 19 2002 Customer Complaint Summary	53
Table 20 2001 Customer Complaint Summary	56
Table 21 2000 Customer Complaint Summary	58
Table 22 1999 Customer Complaint Summary	60
Table 23 Three-Year Comparison of SAIFI and CAIDI	61
Table 24 Exhibit 411.120.b.3.I - Full List	62
Table 25 Exhibit 411.120.b.3.I - SAIFI 2000-2002	63
Table 26 Exhibit 411.120.b.3.I - CAIFI 2000-2002	63
Table 27 Exhibit 411.120.b.3.I - CAIFI 2000-2002	63
Table 28 2001 WPC Indices	86
Table 29 2000 WPC Indices	90
Table 30 Exhibit 411.120 K	94
Table 31 Exhibit 411 130 - Summary of 2002 Interruptions by Cause Category	96



# **Subpart B: Requirements for all Jurisdictional Entities**

#### Introduction

Pursuant to Section 411.120 of Illinois Administrative Code Part 411 ("Part 411"), Illinois Power Company ("Illinois Power", "IP", or the "Company") submits this annual report pertaining to the reliability of the Company's electric transmission and distribution ("T&D") system. This report covers the twelve-month period ended December 31, 2002.

The report is consistent with the format used in the Company's previous Annual Reliability Reports. Based on the Illinois Commerce Commission's ("ICC" or the "Commission") feedback, this format lends itself to being easy to read and concise in details. It also provides better year-to-year comparisons where applicable.

#### **IP's Commitment**

Electric reliability remains a top priority for Illinois Power and its employees. This commitment is reflected in IP's organizational focus and the Company's various programs and initiatives, including customer satisfaction results, programmatic funding, internal performance measures, and system improvements.

No electric distribution system can be 100 percent free from interruption. To achieve even a "near perfect" system would be cost-prohibitive. IP's goal is to determine and implement the appropriate policies, procedures, practices, processes, and programs necessary to provide a level of reliable service that meets its customers' requirements in a cost-effective manner. Customer feedback and surveys reveal that the vast majority of customers are not willing to accept additional costs to improve reliability; statistics also re-emphasize that customers are satisfied with the level of IP's reliable service.

IP is committed to ensuring the reliability of the electric delivery system. IP believes this has been demonstrated through the Company's operations, maintenance, and enhancement of its system; the complete and thorough response to the Commission's data requests, meetings to update the Commission on IP's progress on reliability initiatives, IP's willingness to work candidly with Staff and to more fully understand fundamental differences among Illinois utilities and ongoing efforts to develop a comparable methodology that Staff can use to measure all utilities.

To reinforce the Company's commitment, IP established corporate-wide reliability goals for 2002. These goals were established based on average past performance of non-normalized data. The 2002 goal for SAIFI was 1.4 average interruptions per year per customer; IP achieved a SAIFI of 1.15. The goal for CAIDI was an average of 140 minutes per year per customer; IP achieved a CAIDI of 166 minutes. IP has once again established corporate-wide reliability goals for 2003. SAIFI is targeted for 1.3 and CAIDI is targeted for 140, based on non-normalized data.



Organizational efforts the past couple of years continue to increase the accountability for effectively managing the Company's assets. This Asset Management process continues to be the focus for Illinois Power and is proving very successful for the Company's performance leadership initiatives. This process, illustrated in Figure 1, provides the internal independence and accountability that drive work and processes to support IP's efforts to effectively fund and manage projects, which contribute to meeting the Company's commitment of providing safe and reliable electric service.

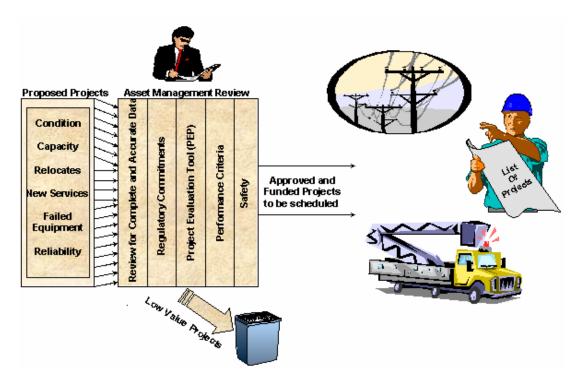


Figure 1 Asset Management Comprehensive Review Process

As an extension of management, the Electric Reliability Leadership Team ("ERLT") continues to provide leadership and direction for the Company's reliability efforts. This cross-functional team works collaboratively to help identify opportunities for education and understanding of the reliability impact to Illinois Power, its employees and customers. This approach provides a high-level focus of reliability impacts and includes accountability on a departmental and individual level which is reflected in goals and initiatives.

IP continues to refine the best fit of practices and use of resources. In March 2002, resources were relocated to the Kewanee area ("satellite office") to improve response time to customers. The Company continues to review and allocate field resources as necessary. Additionally, the Company is currently in the process of reviewing and updating its operating procedures. These efforts provide focus on the best practices necessary to meet reliability commitments and customers' expectations.



# IP's Reliability Indices

IP has a rigorous program to review and verify outage data. This Quality Assurance ("QA") process involves the review of the outage data by dispatch, operations, and reliability personnel. In 2003, an additional high-level, combined review was implemented prior to customer interruption data being saved as quality historical information.

As per definitions outlined in Section 411.20 of 83 Illinois Administrative Code Part 411, IP's customers experienced a system SAIFI of 1.15 interruptions, a system CAIDI of 166 minutes, and a system Customer Average Interruption Frequency Index ("CAIFI") of 1.96 interruptions in 2002. IP's indices are calculated from 2002 historical data with the appropriate exclusions applied. Although CAIDI was higher in 2002 than in 2001, IP believes this is in part attributable to positive factors, such as fewer customer interruptions and improved outage reporting with the partial restoration capability. The Emergency Management Process, as discussed in the paragraph entitled "Emergency Response", was changed in the spring of 2002. Figure 2 reflects this change in the continuing monthly improvement in CAIDI throughout the remainder of 2002. IP will continue to monitor emergency response and outage durations and make adjustments as necessary.

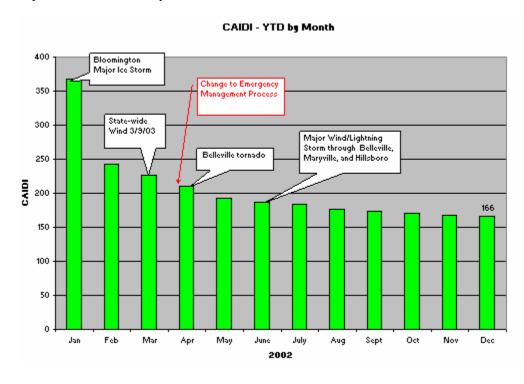


Figure 2 CAIDI YTD 2002 by Month

To calculate CAIDI, the total minutes of interruptions are divided by the total number of customer interruptions. Customer interruptions decreased while at the same time major events days doubled in 2002 compared to 2001. Figure 3 through Figure 5 shows IP's historical performance for each of the last three years in terms of each index.



#### SAIFI Performance 2000 - 2002

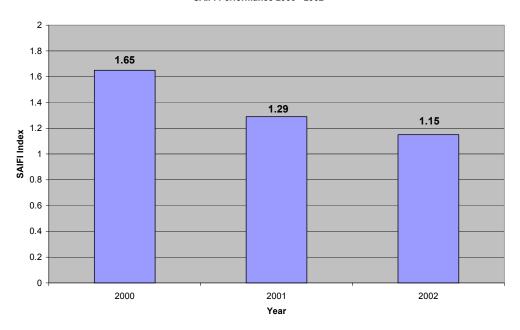


Figure 3 SAIFI 3-Year Summary





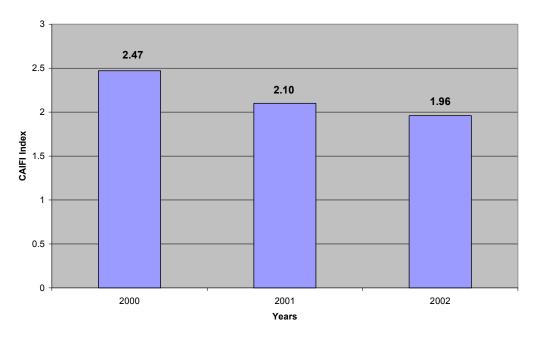


Figure 4 CAIFI 3-Year Summary

#### CAIDI Performance 2000 - 2002

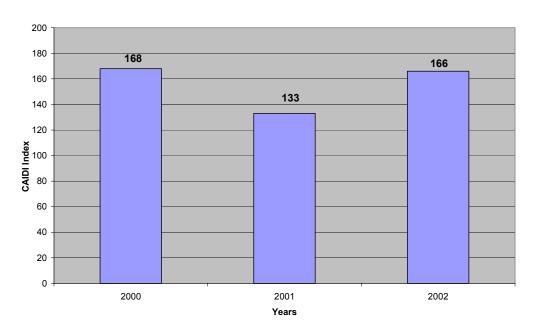


Figure 5 CAIDI 3-Year Summary



# **Interruption Data**

In 2002, not considering any exclusions as outlined in 411.20 of 83 Illinois Administrative Code Part 411, the Company's 592,741 distribution customers experienced 19,618 sustained (lasting more than one minute) interruption events. Customer interruptions ("Cl") totaled 809,392, while customer minutes of sustained interruption ("CMI") reflect 124,717,250 minutes. This represents an 11% improvement in SAIFI from 2001. This SAIFI improvement consists of decreasing sustained interruption events by 10% while increasing the customer base by less than 1%. Figure 6 illustrates the improving trend and overall impact to IP electric customers.

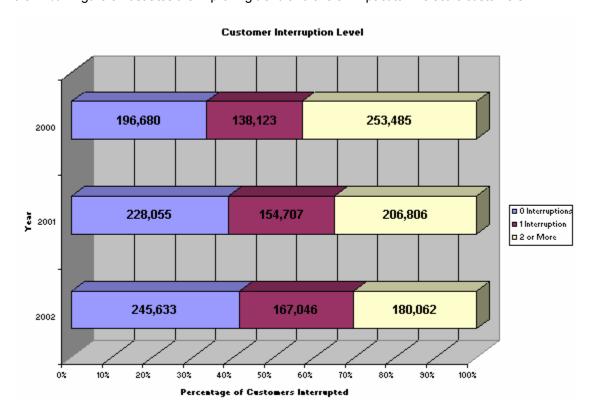


Figure 6 Customer Interruption Impact

IP believes this trend in SAIFI is attributable to many of the various proactive maintenance programs implemented during the past several years. Figure 7 shows the breakdown of 2002 data with no exclusions by durations, while Figure 8 shows the breakdown of the same data by interruptions. For simplicity of reading, some cause codes were combined. Public and customer outages include vehicles, vandalism, accident by others, dig in by others, fires, and problems experienced on the customer's side of the meter. Weather-related outages include events such as tornados, floods, excessive heat- and cold-related outages, and ice storms.



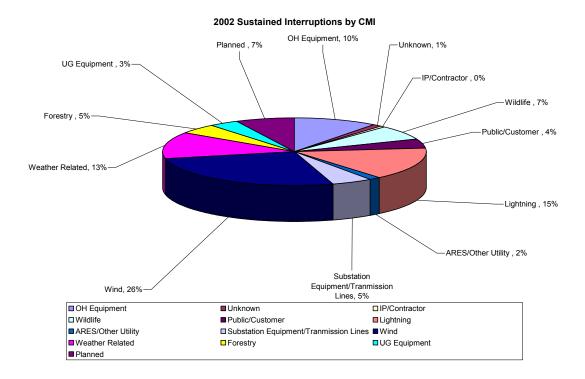


Figure 7 All Events by Duration

#### 2002 Sustained Interruptions by CI

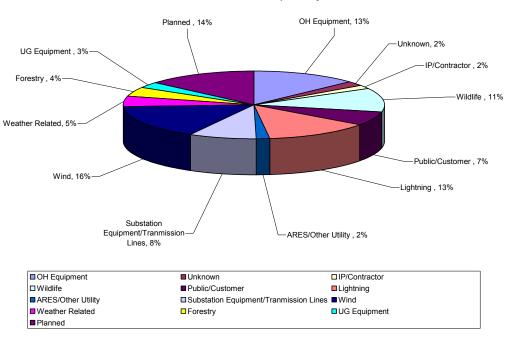


Figure 8 All Events by Interruptions



## **Comparative Data**

The Institute of Electronic and Electrical Engineers ("IEEE") has evaluated several approaches to segregate interruptions into normal or abnormal data. This analysis and recommendation process has been ongoing for some time. Utility personnel from across the country share experiences and practices from their company and regulatory bodies via a Working Group on System Design. Illinois Power participates in this Working Group. A methodology was adopted as a draft by the Working Group and is currently anticipated for final approval in 2003. Most utility surveys on reliability performance draw on this measure as a way to more consistently compare effective results of reliability.

The normalized approach adopted by the IEEE Working Group is called the 2.5 Beta Method. The following steps outline the process for determining the threshold.

- 1. Using the five previous years of data (1997-2001) from all sustained outages, create columns of data with date, year, CMI per day, and SAIDI per day. Also include the customers served.
- 2. Order the SAIDI/Day from Highest to Lowest
- 3. Calculate the natural log (LN function) of each value. Ln(SAIDI/day)
- 4. Calculate the mean ( $\alpha$ ) (AVERAGE function) and standard deviation ( $\beta$ ) (STDEV function) of the natural log values.
- 5. Find the threshold by  $e^{(\alpha+2.5\beta)}$
- 6. For the current year (2002) of data, segment the days above the threshold into the abnormal group.

2000	2001	2002
April 20	June 14	January 31
August 6	October 24	March 9
August 17		April 27
August 18		June 11
August 27		
December 11		

Table 1 Abnormal Days above Threshold using IEEE 2.5 Beta Method

The threshold established for selecting abnormal days using IP's 1997 - 2001 outage data is 7.75 SAIDI/Day. This value is established by using the methodology described above. Any day where SAIDI is greater than 7.75 is considered to have experienced abnormal operating conditions. The proposed IEEE methodology suggests that utilities report outages that occurred on these days separately and that utilities calculate adjusted indices with these days removed.



NOTE: The IEEE Methodology for normalizing outage data does not consider any exclusions, therefore, IP's indices are different than what is reported with ICC or other exclusions.

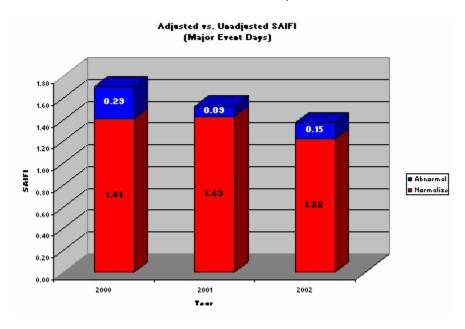


Figure 9 Normalized SAIFI Data

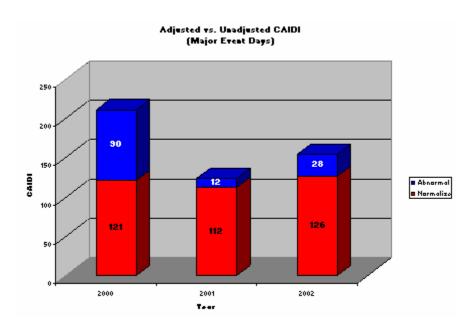


Figure 10 Normalized CAIDI Data



#### **Customer Satisfaction**

As discussed in the requirements in Subpart D of Part 411, IP employed an independent consulting firm to conduct the 2002 Customer Satisfaction Survey. Opinion Dynamics Corporation ("ODC") was used for the baseline survey in 2000. ODC provided good comparisons for 2001 and 2002 as well. IP's survey was conducted between September 27 and November 26, 2002, and surveyed 600 residential and 400 non-residential customers. Figure 11 and Figure 12 provide comparison results for the three-year period for residential and nonresidential, respectively.

The Customer Satisfaction Survey results continue to reveal that Illinois Power customers are satisfied with the overall performance and reliability provided. Historically, IP has ranked at or near the top when compared with other Illinois utilities when it comes to satisfying customers. More analysis of the comparative year-to-year customer satisfaction survey results is provided in the section titled Customer Satisfaction Survey Results.





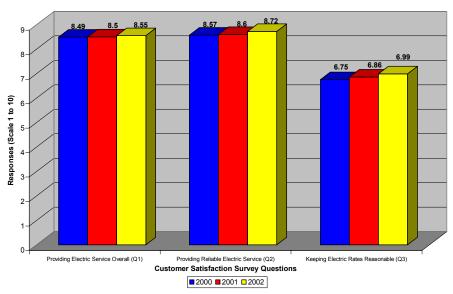


Figure 11 Residential Customer Satisfaction Survey Results

#### Illinois Power Non-Residential 2002 Customer Satisfaction Survey

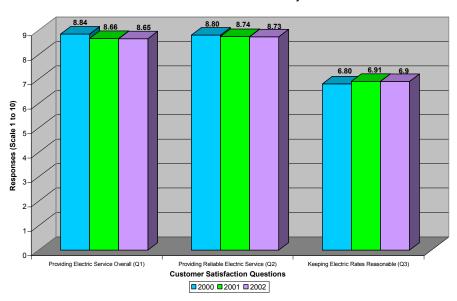


Figure 12 Non-residential Customer Satisfaction Survey Results



## **Worst Performing Circuit Patrols**

In 2001, IP piloted an approach to have a nationally recognized firm conduct a detailed patrol of each circuit that met the definition of worst performing circuit ("WPC"). The firm employed was recognized as a leader in providing expert analysis of pole and system conditions. The 2001 results provided a comprehensive and electronic summary of all conditions found on these circuits. With electronic results, IP was able to systematically review and more efficiently prioritize and implement work plans to address deficiencies on WPCs. More discussion of results and specific circuit initiatives are provided in the section titled 2001 Worst Performing Circuit Remediation.

IP had 20 circuits in 2002 that were categorized as WPCs. Each circuit was preliminarily reviewed for conditions and criteria that caused it to meet this definition. IP again contracted with the same firm in 2002 to provide expert analysis on 17 of these circuits. Five of these 17 circuits were also reviewed as part of IP's ongoing initiative to proactively coordinate distribution circuits; this combined review allows for a better use of resources. Three of the 2002 WPCs that only met the criteria for CAIDI were reviewed separately to determine appropriate next steps. IP then contracted for detailed patrols on three additional circuits that fell just under the threshold to meet the ICC criteria for a WPC.

During WPC inspections both years, a focus has been made to document and correct any map inconsistencies between what is physically in the field and what our electronic mapping system shows. This focus has also been reiterated and expanded to all field personnel to help support IP's effort to provide quality maps, which in turn supports company initiatives such as reducing delays in emergency response, system reliability modeling, and employee safety. Completed work is mapped electronically and is immediately available to engineering design personnel. Updated versions of the map are distributed several times a year and are available to field personnel through the mobile data terminal.

Performance of IP's worst performing circuits over the past several years is summarized in Figure 13, Figure 14, and Figure 15. The improving trends in the range of SAIFI and CAIFI on the worst performing circuits demonstrate the effectiveness of IP's maintenance programs in reducing the frequency of outages for IP customers. On the other hand, the range of CAIDI, which is influenced considerably by weather conditions, is shown to be more volatile irrespective of system maintenance enhancements. More discussion of results and specific circuit initiatives is provided in the section titled 2002 Worst Performing Circuits. Figure 13 presents the range of SAIFI's experienced by those circuits which were designated as WPCs because of SAIFI. Figure 14 and Figure 15 show similar information for those WPCs designated as such due to the level of CAIFI and CAIDI, respectively.



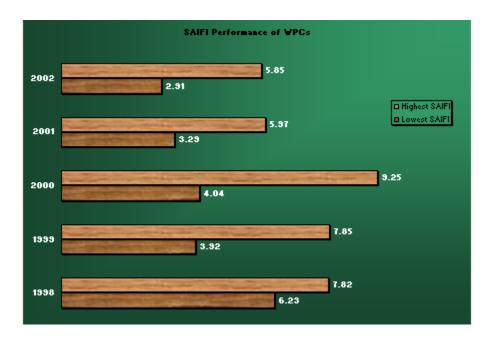


Figure 13 Summary of WPC Performance for SAIFI

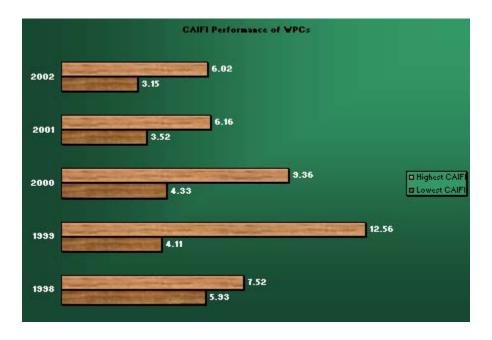


Figure 14 Summary of WPC Performance for CAIFI



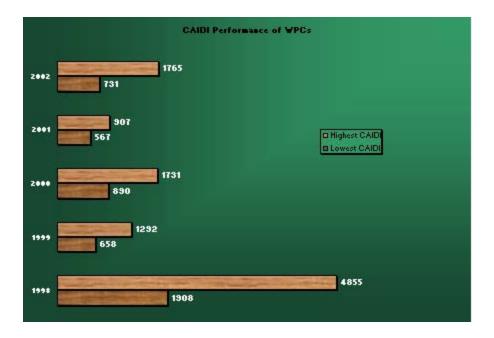


Figure 15 Summary of WPC Performance for CAIDI

### **Lightning Analysis**

IP continues its focus on reducing lightning-induced outages. In 2002, a pilot program on several 2001 WPCs was initiated. This program focused on reviewing and incorporating appropriate engineering practices, including lightning arrester placement and elimination of coiled stingers. Lightning prevention versus lightning protection is also being explored by the installation of several dissipaters. In 2003, Illinois Power will participate in an Electric Power Research Institute ("EPRI") interest group on distribution lightning protection. Effective lightning measurements must be reviewed over a period of time; however, lightning-induced outages were reduced by 4% from 2001 to 2002. More discussion on specific circuit mitigation plans is contained in the section titled 2001 Worst Performing Circuit Remediation.

#### **Technology**

Innovative ways of using existing and new technology enable Illinois Power to provide quality data and data analysis.

- Troubled Outage System ("TOS")
  - TOS outages began being dispatched directly to the mobile data terminals ("MDTs") in April 2002. This efficiency allows field personnel to input the root cause and enter estimated restoration times and corrective actions or comments directly into the MDT. This provides better front-line correlation between employees' actions and understanding the impact of their response on customer reliability.



- Prior to April 2002, TOS did not have the capability of accounting for specific outage times when a segment of customers were restored to service prior to the entire segment being restored. With the implementation of partial restoration, TOS now allows the user to select an option which more accurately reflects the individual customer outage durations by updating circuit restoration activities on individual segments or devices.
- The Proactive Dialer was also implemented in the spring of 2002. This feature allows a dispatcher to enter planned outage information such as date, expected duration, and other important details which is then communicated to affected customers by phone. This automated approach reaches more customers in a short time frame for more efficient communication.
- o In 2003, a Visual Basic tool was installed on the front end of TOS. This view allows dispatchers to study a graphic representation of affected devices during an outage. The dispatcher can use this information to make a more informed decision regarding proximity of available resources to the outage location. The user can zoom in or zoom out on an area to aid in the decision process. Figure 16 shows this real-time visualization of TOS.

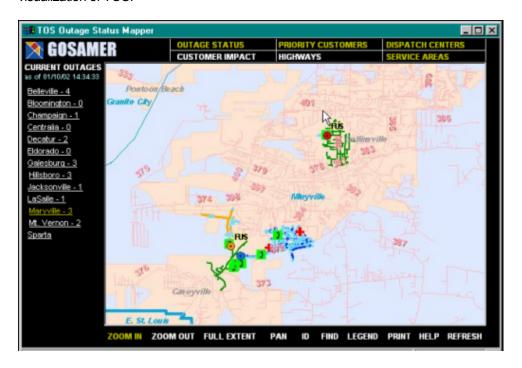


Figure 16 TOS Visual Basic View

• IP uses weather technologies to determine the path and severity of storms. These systems are designed to allow the user to choose from various time frames to predict what weather conditions may be like in a specific area at a specific point in time. Resource needs are identified further ahead of time to allow for more efficient dissemination. IP continues to assess new weather technology as it becomes available.



• The Reliability Assessment Modeling ("RAM") Tool was first introduced to IP in 2002. This tool assimilates historical outage information into a cost-effective approach designed to improve the Company's SAIFI. By picking either a dollar amount or a specific SAIFI improvement index, the user can determine which projects provide the greatest potential improvement by the most cost-effective means. In 2002, IP completed 385 projects identified by this tool. This and other initiatives have helped in improving IP's 2002 SAIFI. This approach will be employed again in 2003.

## **Vegetation Management**

In 2002, IP achieved a four-year trim cycle on all distribution circuits. This commitment was accomplished by good linkage between technology and customer commitment. The Forestry Program ties to the Customer Care System, and notification for trimming is initiated between these two systems. IP has been working toward a four-year trimming cycle for the past several years and committed to meeting this commitment for all areas except the City of Normal by the end of 2002. A four-year trim cycle for Normal was planned by the end of 2003. Good weather late in 2002, good communications, and working collaboratively with Normal City officials allowed Illinois Power to meet this schedule for all areas, including Normal, by the end of 2002. IP takes great pride in this accomplishment, and its employees and contractors are committed to maintaining this schedule.

## **Emergency Response**

Edison Electric Institute ("EEI") recognized Illinois Power as the winner of the 2002 Emergency Assistance Award. IP provided assistance several times in 2002 to utilities in Indiana and Missouri. EEI President Thomas R. Kuhn said "Illinois Power's commitment to the principle of mutual assistance, and its expertise in providing it, set an example for the entire industry." This commitment to assist others is one way Illinois Power lays the groundwork for future support should similar emergency circumstances occur for its customers and facilities.

Illinois Power also made a key change in its Emergency Management Process. The Energy Delivery Emergency Response Organization ("EDERO") is activated when unusual circumstances require concentrated efforts to mitigate or reduce outage duration. As EDERO is activated, additional expertise from the field is now brought in to Central Dispatch to help coordinate restoration efforts. Side-by-side, dispatchers and operations supervisors provide guidance and instruction to crews. Crew resources gain the benefit of operational and technical expertise through a more focused approach from this combined enhancement, creating more confidence and understanding within the organization.

Another focus of the enhanced Emergency Management Process was the addition of an "electronic whiteboard." This resource tracking mechanism was created using a Lotus Notes database to provide more robust communications between Central Dispatch and field personnel. The electronic whiteboard allows a user to update crew location, material needs, and other information related to emergency response and is available for viewing from any location. This efficiency reduces potential rework by keeping everyone up-to-date on progress.

IP continues to use a "damage assessment" process to effectively assess damage and proactively identify material and resource requirements. The Company also leverages material and contractor alliances to ensure adequate and timely allocation of resources.



## **Substation**

Illinois Power uses predictive maintenance techniques (infrared, sound) to inspect IP owned substations and proactively identify potential causes of failures. With this process, several loose connections and one faulty transformer were detected and corrected during 2002. As a result of these findings, many similar connections were cleaned and tightened, adjusted or replaced. Infrared inspections also detected approximately 30 lightning arrester deficiencies. Degraded lightning arresters expose other equipment to voltage spikes and damage when they fail. All faulty lightning arresters were replaced. These improvements provide a safer work environment for employees, prevent potential outages for customers, and prevent collateral damage in the substation due to catastrophic failures.

In addition to traditional animal protection at substations, Illinois Power installed an electronic fence inside the outer fence at a substation in 2002. This low-voltage fence presented in Figure 17 is designed to prevent intrusion from the ground level up. This application will be monitored and evaluated for further use.



Figure 17 Electronic Fence Inside Substation Fence

#### **Animal Protection**

In addition to the substation animal protection described above, IP also began purchasing all new transformers with pre-installed animal and lightning protection. The efficiency gains for field employees on the front end, along with this proactive approach to reducing animal-induced outages is a low-cost way to improve reliability. IP continues to evaluate



opportunities where retrofitting with animal protection potentially improves customers' reliability. Figure 18 shows the application of pole guard. This application is designed to reduce the possibility of an animal climbing onto sensitive equipment and affecting electrical equipment.

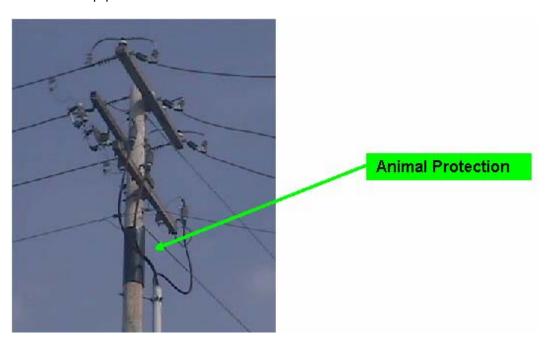


Figure 18 Plastic Sheathing Animal Protection on Pole

#### **New Products Team**

In 2001, a team was chartered to review products recently introduced to the market. This review considers key factors such as functionality, cost, and reliability. This concerted effort helps Illinois Power stay aware of and analyze new applications and materials. Team membership is made up of employees from Purchasing, Standards & Design, and Operations and lays the groundwork for buy-in at the front end.

#### **System Security**

Illinois Power participated on a task force of the Illinois Emergency Communication Network ("IECN"). The IECN was established in 2002 at the request of the ICC to determine methods that would ensure coordination between utilities, governmental agencies and law enforcement agencies when responding to actual or potential natural or man-made disasters that interrupt service or are a threat to service. The virtual communications network resulting from this effort is designed to improve disaster recovery efforts by reducing emergency response times. Once activated, industry participants can directly engage in the exchange of information with each other from remote locations while having a direct link to the Illinois Emergency Management Association ("IEMA") Operations Command Center.

IP also instituted a new security plan after events of September 11, 2001. When Homeland Security levels are changed, IP evaluates the threat or potential threat to determine



appropriate internal efforts. Various actionable levels and efforts are documented in Illinois Power's Disaster Recovery and Response Plans.

To provide day-to-day security, lighting was enhanced at many substations and video technology was installed in several locations as well.

## **Damage Prevention**

IP is a member of the Joint Utility Locating Information for Excavators ("J.U.L.I.E."). To protect the Company's underground infrastructure and ensure continuation of service, Illinois Power provides a significant amount of information to our customers, the general public, excavators, and emergency services personnel regarding safety and damage prevention. Some activities IP performs in support of this initiative are: provides employee participation on the J.U.L.I.E Board and Committees; mails bill inserts to educate customers; backflags all new underground facilities to communicate to IP and other utilities' crews the location of facilities; participates with presentations on underground safety and education of state laws at J.U.L.I.E. sponsored excavator breakfasts; maintains list and sends annual reminder about digging safely to excavators and contractors in service territory; contacts top 30 "worst-hitter" excavators for special awareness, reminders, and phone contacts.

## **Format of Report**

The remainder of the report has been structured to respond to each section in Part 411. The text of Part 411 is provided in italics. The Company's response to each section, if applicable, is contained directly below the quoted section of the code.

## Summary

Illinois Power is very serious about reliability and is taking prudent measures to ensure the continued offering of reliable, safe and responsive service to all customers. Based on IP's "normal" performance over time, the Company has demonstrated consistent performance in terms of providing reliable service.

Illinois Power is committed to continuing to provide safe and reliable service in order to satisfy customers' needs. 2002 was the first year IP incorporated both reliability and customer service targets into corporate performance measures and 2003 continues this focus. IP's performance initiatives seek to continually position us for innovative and new opportunities for customers, employees, and stakeholders that are being created by the evolving energy market.



#### **Section 411.20 Definitions**

This section of the Rule sets forth definitions to be used for this filing. Some definitions have required interpretation and this section will outline IP's interpretation of the definitions.

All index calculations started from a database of sustained electric interruptions (those lasting more than one minute).

## **Worst Performing Circuits Definition**

The worst performing circuits definition relies on two other definitions from Part 411.20 as detailed below:

"Worst performing circuits" are those distribution circuits that, for each reliability index, are among the one percent of all circuits in an operating area (or at least one circuit for each reliability index) with the highest achieved values (lowest performance levels) for the reliability index. For the purpose of identifying worst performing circuits, only distribution circuit interruptions and customers affected by such interruptions shall be considered in calculating the reliability indices.

<u>"Distribution circuit"</u> is a circuit owned and/or operated by a jurisdictional entity and designed to operate at a nominal voltage of 15,000 volts or less and to supply one or more distribution transformers.

<u>"Distribution circuit interruption"</u> is an interruption originating at a point that is between the circuit-interrupting device at the substation supplying the distribution circuit and the distribution transformer.

Based on these three definitions, IP has calculated worst performing circuit indices for the 887 circuits that serve customers at 15 kV or less. IP further included only interruptions that occurred between the substation breaker/recloser and the distribution transformer as shown in Figure 19.

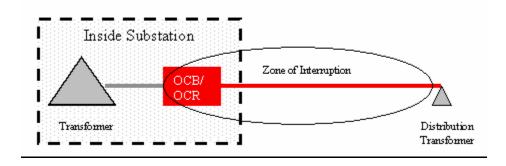


Figure 19 Distribution Circuit for WPC Calculation

IP further excluded interruptions with the following cause codes per the "Interruption" or "Outage" definition: transmission and substation, ARES or other utility or ISO caused,



Customer Totals, and Intentional. The specific excluded cause codes were updated in 2002 to remove duplication and are shown in Table 2.

Table 2 Worst Performing Circuit Cause Code Exclusions

Category	Cause Description	<b>Cause Code</b>
ARES/OTHER TOTAL UTILITY TOTAL	OPERATING EVENT	OAEV
ARES/OTHER TOTAL UTILITY TOTAL	LOSS OF SUPPLY	OASS
CUSTOMER TOTAL	CUSTOMER EQUIPMENT	CUCE
CUSTOMER TOTAL	CUSTOMER REQUEST	CUCR
CUSTOMER TOTAL	NONPAYMENT OF BILL	CUNP
CUSTOMER TOTAL	TAMPERING WITH SERVICE	CUTS
INTENTIONAL TOTAL	EMERGENCY REPAIRS	SCER
INTENTIONAL TOTAL	POLICE/FIRE/GOVT. AGENCY	SCGA
INTENTIONAL TOTAL	UNSAFE/HAZARDOUS CONDITIONS	SCHC
INTENTIONAL TOTAL	PROTECTION SYSTEM INTEGRITY	SCLC
INTENTIONAL TOTAL	MAINTENANCE/REPAIR/UPGRADE	SCMU
INTENTIONAL TOTAL	SCHEDULED CONSTRUCTION	SCSC
NOT	NON-IP PROBLEM	OTNI
TRANSMISSION & SUBSTATION	CONTAMINATION	TSCT
TRANSMISSION & SUBSTATION EQUIPMENT	SUBSTATION EQUIPMENT	TSSE
TRANSMISSION & SUBSTATION EQUIPMENT	TRANSMISSION SYSTEM OUTAGE	TSTS
CUSTOMER	ACCESS TO EQUIPMENT DENIED	CUAD
CUSTOMER	INTERRUPTIBLE SERVICE TARIFF	CUIS

#### **ICC Indices Definition**

Calculation of the ICC reliability indices provides a different view of the data than does the calculation of worst performing circuits. For the ICC reliability indices, calculations were made for all 1,244 circuits regardless of voltage. IP excluded interruptions with the following cause codes per the "Interruption" or "Outage" definition: transmission and substation, ARES or other utility or ISO caused, Customer Totals, and Intentional. The current and specific excluded cause codes are shown in Table 3.



Table 3 ICC Cause Code Exclusions

Category	Cause Description	Cause Code
ARES/OTHER TOTAL UTILITY TOTAL	OPERATING EVENT	OAEV
ARES/OTHER TOTAL UTILITY TOTAL	LOSS OF SUPPLY	OASS
CUSTOMER TOTAL	CUSTOMER EQUIPMENT	CUCE
CUSTOMER TOTAL	CUSTOMER REQUEST	CUCR
CUSTOMER TOTAL	NONPAYMENT OF BILL	CUNP
CUSTOMER TOTAL	TAMPERING WITH SERVICE	CUTS
INTENTIONAL TOTAL	EMERGENCY REPAIRS	SCER
INTENTIONAL TOTAL	POLICE/FIRE/GOVT. AGENCY	SCGA
INTENTIONAL TOTAL	UNSAFE/HAZARDOUS CONDITIONS	SCHC
INTENTIONAL TOTAL	PROTECTION SYSTEM INTEGRITY	SCLC
INTENTIONAL TOTAL	MAINTENANCE/REPAIR/UPGRADE	SCMU
INTENTIONAL TOTAL	SCHEDULED CONSTRUCTION	SCSC
CUSTOMER	ACCESS TO EQUIPMENT DENIED	CUAD
CUSTOMER	INTERRUPTIBLE SERVICE TARIFF	CUIS
NOT	NON-IP PROBLEM	OTNI

Other data slices were required to calculate the other required parts specifically for ARES versus IP, planned versus unplanned, and controllable versus uncontrollable.



#### **Urban and Rural**

Classification of circuits as urban or rural is based on the customer density per line mile. Circuits with fewer than 50 customers per line mile are classified as rural, with the exception of customer-dedicated substations. All others are classified as urban. Using this criteria, 19% are customer dedicated, 40% are classified as rural circuits, and 41% are classified as urban circuits, as shown in Figure 20.

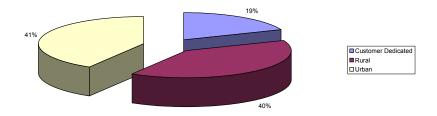


Figure 20 Characterization of Distribution Circuits

# ILLINOIS DOWER

#### **SECTION 411.110 RECORD-KEEPING REQUIREMENTS**

# Subpart B: Requirements for all Jurisdictional Entities

# Section 411.100 Reliability Obligations

- a) Each jurisdictional entity shall provide services and facilities that, in accordance with the Act and other applicable statutes, provide an adequate, efficient and reasonable level of reliability giving appropriate consideration to the costs and benefits of changing or maintaining the level of reliability.
- b) Each jurisdictional entity shall plan, design, construct, operate and maintain its facilities, including equipment, apparatus, systems, and property, to prevent controllable interruptions of service and to meet the requirements of this Part, consistent with the requirements in subsection (a). If such interruptions occur, the jurisdictional entity shall reestablish service as soon as it can and in a time consistent with general safety and public welfare.
- c) Each jurisdictional entity shall adopt and implement procedures for restoration of transmission and distribution services to customers after an interruption on a nondiscriminatory basis without regard to the identity of the provider of power and energy.
- d) Whenever a jurisdictional entity intends to interrupt electric service for the purpose of working on the system, the jurisdictional entity shall make reasonable efforts to notify those customers who may be affected by such interruption in advance of the construction, repair, or maintenance.
- e) Each jurisdictional entity shall design its system according to generally accepted engineering practices, including consideration of normally expected weather, animal activity and other conditions.
- f) Each jurisdictional entity shall adopt and maintain appropriate operating procedures and reliability related administrative procedures.

# Section 411.110 Record-keeping Requirements

- a) Required records. Except as provided in subsection (b) below, a jurisdictional entity shall maintain, for the most recent five-year period, the records listed below.
  - 1) Records sufficient to determine a history of electric service interruptions experienced by each customer at the customer's current location. The records shall be sufficient to determine the information listed below for each interruption.
    - A) Starting date of the interruption.
    - B) Starting time of the interruption.
    - C) Interruption duration.



- D) Description of the cause of the interruption.
- E) Operating areas affected.
- F) Circuit number(s) of the distribution circuit(s) affected.
- G) Number of customers affected.
- H) Service account number of each customer affected.
- I) Address of each affected customer location.
- J) Name of each affected customer's electric energy supplier, if known.

IP maintains all of the required data. IP continues to use the Trouble Outage System and make appropriate enhancements and modifications to capture detailed customer information. The Company monitors and evaluates other technologies to determine the best benefit to IP and to its customers.

2) Records showing, for each distribution circuit, the total number of customers served by the circuit at the end of each year.

On December 31<sup>st</sup> of each year, a snapshot of all active IP customers is taken. This customer snapshot is retained and used for all future reporting for the calendar year. Additionally, the snapshot is connected to historical interruption data.

b) Periods for which records are not required. A jurisdictional entity need not maintain records reflecting the information identified in subsection (a) for any period prior to calendar year 1994. A jurisdictional entity which, as of January 1, 1994, did not have the technical capability to collect and record some or all of the information identified in subsection (a) need not maintain records reflecting such information for any period prior to January 1, 1999. A jurisdictional entity serving retail customers in Illinois as of December 16, 1997, and that was exempted from the requirements of the Commission's electric service reliability policy (83 Ill. Adm. Code 410, Subpart C) as of that date, need not maintain records reflecting such information for any period prior to January 1, 2002.

# **Section 411.120 Notice and Reporting Requirements**

a) Telephone or facsimile notice. A jurisdictional entity must provide notice by telephone or by facsimile transmission to the Consumer Services Division of the Commission when any single event (e.g., storm, tornado, equipment malfunction, etc.) causes interruptions for 10,000 or more of the jurisdictional entity's customers for three hours or more. After such interruptions have continued for three hours, a jurisdictional entity must provide notice within one hour when the notice would be provided during normal business hours, or within the first hour of the next business day. A jurisdictional entity shall provide updates every two hours during the normal business day until service is restored to all customers involved. To the extent that data and information are known, such notice shall include the data and information listed below.



- 1) An estimate of the number of customers the interruptions affect.
- 2) Starting date of the interruptions.
- 3) Starting time of the interruptions.
- 4) Duration of the interruptions.
- 5) Locations of the interruptions, described as precisely as possible in generally recognized and geographically oriented terms such as street address, subdivision, or community.
- 6) Description of the cause of the interruptions.
- 7) The date and time when the jurisdictional entity expects to restore electric service.
- 8) The name and telephone number of a jurisdictional entity representative the Commission Staff can contact for more information about the interruptions.
- 9) Customer call volume to the jurisdictional entity during the interruption as compared to normal call volume and the steps the jurisdictional entity is taking to address call volume.

IP met this requirement during 2002.

- b) Annual report. On or before June 1 of each year, each jurisdictional entity, except for jurisdictional entities exempt under Section 411.110(b), shall file with the Chief Clerk of the Commission an annual report for the previous calendar year submitted under oath and verified by an individual responsible for the jurisdictional entity's transmission and distribution reliability.
  - The data requirements incorporated in the annual report are not meant to replace timely reports on outages when they occur or are remedied as required by other provisions of this Part.
  - Supporting data used for more than one purpose or calculation need be submitted only once in each annual report, if submitted with clear crossreferences. Data should be consistent and differences reconciled to the extent possible.
  - 3) The annual report shall include the information listed below.
    - A) A plan for future investment and, where necessary, reliability improvements for the jurisdictional entity's transmission and distribution facilities that will ensure continued reliable delivery of energy to customers and provide the delivery reliability needed for fair and open competition, along with the estimated cost of implementing the plan and any changes to the plan from the previous annual report.



i) The plan must cover all operating areas, including a description of the relevant characteristics of each operating area and the age and condition of the jurisdictional entity's equipment and facilities in each operating area.

As of December 31, 2002, Illinois Power provided electric service to 592,741 customers, of which nearly 89% are residential, 11% are commercial, and less than 1% are industrial. The customer distribution is shown in Table 4.

Table 4 Characterization of IP's Customer Base

Area	Residential	Commercial	Industrial	Totals
Belleville	72,231	7,248	22	79,501
Bloomington	50,547	7,110	26	57,683
Centralia	14,194	2,169	15	16,378
Champaign	63,999	7,916	36	71,951
Danville	29,143	3,293	31	32,467
Decatur	54,542	6,732	42	61,316
Galesburg	38,968	4,958	16	43,942
Granite City	20,988	2,194	23	23,205
Hillsboro	34,647	5,023	21	39,691
Jacksonville	11,591	1,509	11	13,111
Kewanee	13,173	1,908	2	15,083
LaSalle	31,577	4,073	34	35,684
Maryville	35,724	3,257	17	38,998
Mt. Vernon	19,051	3,186	9	22,246
River Bend	15,647	1,552	17	17,216
Sparta	21,488	2,766	15	24,269
Totals	527,510	64,894	337	592,741

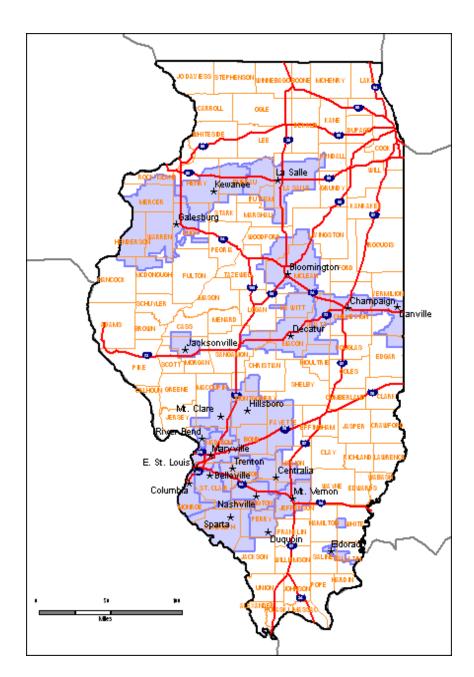


Figure 21 Illinois Power's Service Territory

IP's service territory covers approximately 15,000 square miles and is represented by blue in Figure 21. The majority of IP's customer base is located in rural areas and small towns throughout Illinois. Approximately 89% of the distribution system is overhead conductor with the other 11% being underground conductor.



ii) The plan shall cover a period of no less than three years following the year in which the report was filed.

# 2002 Reliability Accomplishments

# **Substation Reliability Centered Maintenance**

The preventative maintenance electricians completed infrared and ultrasonic inspections of all IP owned substations. The problems found ranged from 7°F to 429°F temperature rise at connections and internal problems with a transformer. Finding these problems and correcting them improved safety for our employees. It also prevented both outages to our customers and collateral damage in the substation from catastrophic failures.

Where the temperature rise is located is as important as the amount. A 12°F rise on the surface of a 1000-gallon oil circuit breaker tank is at least as critical as a 500°F rise on a disconnect switch. The actual temperature at the breaker contacts is much higher but it is insulated by the volume of oil in the breaker. Another example of this is bushings. Small temperature rises can accelerate the aging of these bushings.

This year, approximately 30 lightning arrester problems were found through an Infrared Inspection process enhancement. These degraded arresters expose other equipment to voltage spikes and collateral damage when they violently fail. All of these have been replaced.

As a result of these findings, many connections were cleaned and tightened, adjusted or replaced to normalize equipment temperatures. Below are some examples of the more critical temperature-related problems.

- Belleville Pontiac Substation Ckt239 A-phase Recloser Abnormal heating (236°F) at the source bushing connector. Connection was cleaned and tightened.
- Bloomington Beich Rd Substation Disconnect 91L Abnormal heating (362°F) at the top connection. Connection was cleaned and tightened.
- Carlinville Substation Ckt 864 B-phase Recloser Abnormal heating (30°F) in the tank of the recloser. Recloser was replaced.
- Cottage Hills Substation Transformer #1 Abnormal heating (210°F) was detected in a spot on the side of the transformer. Further testing revealed a problem in the load tap changer. This problem occurred before normal inspection intervals for this equipment. The load tap changer was rebuilt and the transformer was tested for any other problems. No other problems were found. An on-line oil filter was added to the load tap changer in order to extend the life of its components. Illinois Power has two other transformers with this same type load tap changer. They were inspected and found to have the beginnings of the same problem. On-line oil filters will be added to these transformers also.



- E. Collinsville Substation 138KV bushing on OCB1472 abnormal heating (45°F) at the bushing cap. Bushing was inspected, cleaned and re-tightened with little result, so bushing was replaced.
- Edwardsville SIU Substation 34.5KV bushing on Transformer #2 Abnormal heating (30°F) at the bushing cap. Bushing was inspected, cleaned and retightened.
- Millstadt Substation Ckt 230 B-phase Regulator Abnormal heating (315°F) at the source bushing connection. Connection was cleaned and tightened.
- Morrisonville Substation Disconnect 27L A-phase Abnormal heating (347°F) at the top connection. Connection was cleaned and tightened.
- N. LaSalle Substation Ckt 516 A-phase Recloser Abnormal heating (429°F) at the source bushing connector. Connection was cleaned and tightened.
- Stallings Substation Disconnect 34M Abnormal heating (360°F) at the bottom wire connection. Connection was cleaned and tightened.
- Steeleville Substation 34.5KV bushing on OCB3350 Abnormal heating (47°F) at the bushing cap. Bushing was inspected, cleaned and tightened.
- Waltonville Substation Ckt 121 B-phase Recloser Abnormal heating (7°F) in the tank. Recloser was replaced.

### **Capacity Planning**

In 2002, IP's Electric and Gas Planning Group implemented an enhanced planning study review and approval process. This included establishing a Management Review Board ("MRB") that is made up of internal stakeholders. The MRB reviews the system capacity studies, discusses issues and approves the plan. The comprehensive review process provides the key stakeholders with understanding of the issues and gains support for the long range system reinforcement plans. This enhancement of the long range planning process helps ensure more efficient use of resources and timely implementation of system capacity additions. Long range capacity planning studies were completed for eight areas in 2002 and approved by the MRB.

### **Forestry**

As committed, Illinois Power met a four-year trim cycle for all distribution circuits in 2002. This accomplishment is the result of good linkage between technology and our commitment to customers. Even though the City of Normal was originally planned for 2003, good communications with Normal city officials and good use of resources allowed IP to meet this schedule in 2002. IP believes a four-year trim cycle provides a reasonable balance between reliability, cost and customer satisfaction, and is committed to maintain this schedule.



#### **Animal Protection**

Illinois Power installs animal and lightning arrester protection on all new distribution transformers and continues to retrofit them on an as-needed basis. A new electronic fence was installed at one of the substations animal-guarded in 2002. Additionally, several other substations were retrofitted with traditional animal protection. IP will continue to animal guard substations and the distribution system.

#### **Circuit Patrols**

IP employs a four-year cycle for distribution circuit patrols, conducting twenty-five percent annually. Identified deficiencies are prioritized and addressed as follows: danger – given immediate attention; maintenance – scheduled to be worked in near term; and construction – requires engineering and corrected in near term.

#### **Storm Restoration**

Illinois Power was presented the 2002 Emergency Assistance Award by EEI. By providing assistance to other utilities on an emergency basis, IP lays the groundwork for support should similar conditions and resource needs arise for IP's territory.

Internally, IP enhanced the emergency response process in 2002. While anticipating resource needs for engineering, contractor, and construction resources, field supervision is also deployed to Central Dispatch to provide technical expertise to effectively manage response. The additional experience and knowledge from field supervision not only assists the Dispatchers in their duties, but also provides a higher level of technical expertise to field personnel. Rapid identification of major problems through efficient damage assessment continues to be a factor in effective restoration, including material and resource needs.

# Lightning

In 2002 IP piloted an approach to mitigate the impact of lightning on some of the 2001 WPCs where lightning was a leading cause of interruptions. This effort focused on two primary mitigation efforts: appropriate lightning arrester placement per current industry standards and correct connection lead configuration. IP will continue to assess the effect over time.

# 2003 Reliability Plan

Table 5 provides a breakdown of the 2003 planned Capital and O&M expenditures (in constant 1998 dollars.) The Company prepares detailed budgets only for the current year, which do not reflect loadings. The reliability plan for 2003 provides a more detailed level of discussion pertaining to the activities that IP will undertake during the year to address reliability concerns. These numbers may vary from previously provided planned expenditures to reflect current or updated plans.

Table 5 2003 Capital and O&M Planned Expenditures

Categories	Capital Expenditures (000s)	O&M Expenditures (000s)
TRANSMISSION		
Maintain/Upgrade/Operate/Build	\$2,160	\$610
Rebuilds Due to Condition/Capacity (lines)	\$2,336	\$1,105
Vegetation Management	\$0	\$1,245
DISTRIBUTION		
Maintain/Upgrade/Operate/Build	\$11,399	\$17,221
Rebuilds Due to Condition/Capacity (lines)	\$11,838	\$835
Vegetation Management	\$0	\$11,660
	\$27,733	\$32,676

#### **Substation RCM**

In 2003, substation load readings will be collected using handheld devices. These handhelds are currently being used for preventive maintenance order processing. When these handhelds are synchronized with the server, readings are automatically posted to the Load Summary module in Distribution Database. This will help assure tracking of the readings, eliminate unnecessary handoffs, and supply results and information in a timely fashion.

# **Capacity Planning**

Ongoing system planning studies are performed to help ensure the integrity of the T&D system. These efforts include preparing electric load forecasts, monitoring facility loadings, evaluating the system impacts of proposed generating units, and identifying required system reinforcements and expansions. Although not readily quantifiable, the reliability improvements associated with capacity-related system reinforcements and expansions include the following:

- Reduced risk of equipment failure due to overload
- Improved reserve capability and correspondingly, reduced outage duration
- Facility upgrades, which can also address condition issues

# ILLINOIS POWER

# **SECTION 411.120 NOTICE AND REPORTING REQUIREMENTS**

#### **Proactive Protective Device Coordination**

Illinois Power is in the fifth full year of a distribution circuit proactive protective device coordination program. Under the program, approximately 10% of the Company's distribution circuits are analyzed each year. The scope of this effort includes identifying the system changes and upgrades needed to prevent protective device overload, ensuring proper coordination between protective devices, and avoiding the exceedance of the device interrupting capacity. Review of the circuits scheduled for analysis during a specific year is an ongoing process. Based on additional knowledge, such as customer load requirements, or changing priorities, circuits may either be delayed or moved up on the review list. The program is viewed as one of the measurements of IP's improving SAIFI trend by reducing the frequency of customer interruptions by protective device misoperations. In 2002, IP combined five of the WPCs with the proactive coordination efforts. IP will analyze 84 circuits in 2003 as part of this program.

# **Forestry**

IP will maintain a four-year trim cycle in 2003. In addition to the regular trim cycle, field resources are instructed to evaluate vegetation conditions while on routine or emergency response work. Additionally, an entire circuit is also reviewed once every four years as part of IP's maintenance program. In 2003 IP will trim 157 circuits.

#### **Animal Protection**

In 2003, all new distribution transformers are purchased with pre-installed animal and lightning protection. IP will continue to evaluate and retrofit systems and substations as appropriate.

#### **Circuit Patrols**

IP will patrol twenty-five percent of distribution circuits in 2003.

# Lightning

In addition to the ongoing pilot on 2001 WPCs, IP will participate in an EPRI study designed to assess mitigation of lightning's impact on distribution substations and equipment.

The following tables reflect anticipated capital and O&M expenditures for years 2004 through 2006, based in part on 2003 approved expenditure levels and historical performance.



# 2004 Reliability Plan

The planned capital and O&M expenditures for 2004 are show in Table 6.

Table 6 2004 Planned Capital and O&M Expenditures

Categories	Capital Expenditures (000s)	O&M Expenditures (000s)	
TRANSMISSION			
Maintain/Upgrade/Operate/Build	\$2,256	\$612	
Rebuilds Due to Condition/Capacity (lines)	\$2,323	\$1,109	
Vegetation Management	\$0	\$1,250	
DISTRIBUTION			
Maintain/Upgrade/Operate/Build Substations	\$14,970	\$17,290	
Rebuilds Due to Condition/Capacity (lines)	\$16,012	\$838	
Vegetation Management	0	\$11,707	
	\$35,561	\$32,806	

# 2005 Reliability Plan

The planned capital and O&M expenditures for 2005 are shown in Table 7.

Table 7 2005 Planned Capital and O&M Expenditures

Categories	Capital Expenditures (000s)	O&M Expenditures (000s)
TRANSMISSION		
Maintain/Upgrade/Operate/Build	\$2,232	\$616
Rebuilds Due to Condition/Capacity (lines)	\$2,314	\$1,116
Vegetation Management	\$0	\$1,258
DISTRIBUTION		
Maintain/Upgrade/Operate/Build	\$12,309	\$17,395
Rebuilds Due to Condition/Capacity (lines)	\$14,097	\$843
Vegetation Management	\$0	\$11,778
	\$30,952	\$33,006

# 2006 Reliability Plan

The planned capital and O&M expenditures for 2006 are shown in Table 8.

Table 8 2006 Planned Capital and O&M Expenditures

Categories	Capital Expenditures (000s)	O&M Expenditures (000s)
TRANSMISSION		
Maintain/Upgrade/Operate/Build	\$2,208	\$620
Rebuilds Due to Condition/Capacity (lines)	\$2,306	\$1,123
Vegetation Management	\$0	\$1,265
DISTRIBUTION		
Maintain/Upgrade/Operate/Build	\$10,624	\$17,504
Rebuilds Due to Condition/Capacity (lines)	\$14,057	\$848
Vegetation Management	\$0	\$11,852
	\$29,195	\$33,212

iii) The plan shall identify all foreseeable reliability challenges and describe specific projects for addressing each.

# **Reliability Challenges**

#### **New Substation and Line Siting Challenges**

On May 13, 2002, the Monroe County Zoning Board of Appeals unanimously rejected Illinois Power's request for a bulk variance and special use permit for a proposed 138/34 kV substation site near Valmeyer, Illinois. The substation is a key component of a major system reinforcement plan that includes construction of a new 138 kV line and two new 34 kV lines to provide needed system capacity for future load growth and ensure reliable service to Monroe County Electric Cooperative members, Waterloo Municipal customers and Illinois Power Company retail customers in Monroe County. The new substation would also provide another source to the present radial 34 kV system, improving the ability to maintain or restore service under adverse conditions.

Rejection of the proposed substation site near Valmeyer by the Monroe County Zoning Board of Appeals is an example of the increasing opposition and challenges faced when trying to locate new electric T&D facilities. No one disagreed with the need for the facilities, and there was very strong support for the project at the hearing. However, two adjacent property owners opposed the project, and the Board concluded it was the wrong site. Prior to the zoning board hearing, Illinois Power had evaluated 24 potential locations for the substation and eliminated all but the proposed site because the property owners were unwilling to sell the property or the property was unacceptable as a substation site.



In June 2002, Illinois Power filed a complaint in the circuit court of Monroe County against the Monroe County Board of Appeals. On August 27, 2002, the court awarded summary judgment to IP and declared that Illinois Power has the right to locate and construct the electric substation on the proposed site without any permission required by the Monroe County Zoning Board of Appeals. The Monroe County Zoning Board of Appeals did not appeal the court's decision. IP took possession of the property for the substation site on December 13, 2002. Illinois Power expects to complete the construction of the substation by June 1, 2003, except for the 138 kV relaying portion which is to be completed by December 2003.

With respect to the two new 34 kV lines, IP has experienced numerous right-of-way, damages, and access issues which have led to additional construction time and increased costs. The June 1, 2003 target completion date for this work is likely to slip.

In February 2003, Illinois Power made a filing with the ICC to request a Certificate of Public Convenience and Necessity for the new 138 kV line. The ICC Staff has recommended that the Commission approve the Company's request. There are no other interveners and no contested issues in the case. IP is awaiting the Administrative Law Judge's Proposed Order. Illinois Power anticipates the ICC will grant the certificate for the 138 kV line during the summer of 2003. Construction of the new line is expected to commence soon thereafter, consistent with environmental and other issues and could be completed within four months.

# **Department of Transportation Ruling**

The Department of Transportation Hours-of-Service ("HOS") Law takes effect on January 4, 2004. Illinois Power, along with many others from the Utility Industry, are participating with the Edison Electric Institute ("EEI") group to request an exemption for utilities. The full impact of the DOT/HOS law has not been determined but the potential implications on employee working hour limitations could create a much greater challenge for IP during emergency response and restoration situations.

### **Managing Community Relations**

Aesthetics continue to create tensions between communities' initiatives to maintain attractive sites and to expand business opportunities and utilities' abilities to provide safe and reliable electricity. Some communities within Illinois Power's service territory continue to press for underground primary systems. Underground systems are inherently more costly to maintain and do not afford utility personnel the advantage of sight detection to efficiently locate problems. This potential delay in locating weak or problematic areas lends itself to increased outage durations. Additionally, some communities continue to voice concerns on tree aesthetics. IP vegetation management techniques are designed to protect the overall health of a tree, but at the same time ensure clearances that allow the Company to deliver continuous safe and reliable power. Communities' concerns for aesthetics continue to require IP to invest additional time and resources in working through the issues to effectively maintain a safe and reliable system.



# **Ongoing Challenges**

In today's rapidly changing energy market, utilities face new challenges daily. In preparing for competition, those changes must be acted upon responsibly and quickly. Dedicated IP employees continue to make sound decisions to navigate through these changes to incorporate the best business practices and processes to meet these challenges.

iv) The plan shall provide a timetable for achievement of the plan's goals.

Table 9 Identified Initiatives for 2003

Identified Initiatives for 2003	Status	Schedule	Comments
Continue to build new designs with adequate lightning and animal protection.	On track	N.A.	Review and update Standards as appropriate.
Investigate enhanced Lightning Protection Schemes.	On track	12/31/03	Continue evaluation of pilot program on 2001 WPCs with lightning outages and compare mitigation efforts with new lightning data.  Participate on EPRI-sponsored Lightning Analysis Project
Forestry	On Track	12/31/03	IP will trim 157 circuits in 2003 and maintain a four-year trim cycle.
Proactive Coordination of Circuits	On Track	12/31/03	Circuits that are approved by asset management will be scheduled for implementation during 2003. IP will analyze 84 circuits in 2003 as part of the proactive coordination program.
Animal Protection	On Track	3/31/03	All new distribution transformers will be preinstalled with animal (and lightning) protection.
Annual Circuit Patrols	On Track	12/31/03	Patrol 25% of distribution circuits and schedule deficiencies for corrective action.
Company-wide reliability goals	On Track	12/31/03	Establish, track, and communicate corporate-wide reliability goals
Reliability Assessment Modeling Tool	On Track	12/31/03	Complete viable projects as identified by the tool.
Technology	On Track	12/31/03	Continue to leverage existing technology and evaluate new technologies for use and



Identified Initiatives for 2003	Status	Schedule	Comments		
			application to improve reliability efforts.		
Substation Preventative Maintenance Program	On Track	12/31/03	Automate collection and entry of substation load readings between handheld device and system.		
Complete Corrective Actions needed on 2001 and 2002 WPCs	Ongoing	12/31/03	Less than 2% of work remains on 2001 WPCs. Complete all work on 2002 WPC actions as approved via Asset Management Process.		

v) The plan shall report and address all unresolved reliability complaints about the jurisdictional entity's system received from other utilities, independent system operators, and alternative retail electric suppliers.

There were no unresolved complaints from other utilities, independent system operators or alternative retail electric suppliers as of December 31, 2002.

- vi) The plan shall report the specific actions, if any, the jurisdictional entity is taking to address the concerns raised in such complaints received from other utilities, independent system operators, and alternative retail electric suppliers.
- vii) The plan must consider all interruption causes listed in Section 411.120(b)(3)(D).

Illinois Power's plan considers all interruptions.

viii) The plan must consider the effects on customers and the cost of reducing the number of interruptions reported as required by Section 411.120(b)(3)(C).

The Company's business strategy is to provide safe, reliable, cost-effective, and responsive service to all customers regardless of commodity supplier. The plans to improve reliability provided herein were prepared with the objective of minimizing the frequency of interruptions experienced by customers. No electric system can be 100 percent free from interruption. IP is constantly seeking cost-effective techniques to construct, operate and maintain the system. If a customer experiences an interruption, the Company restores service as quickly as possible. In support of that strategy, the results of the 2002 independently performed customer satisfaction survey show IP's residential and non-residential customers rated the Company 8.55 and 8.65, respectively, on a scale of 1 to 10 when asked about IP's overall provision of electric service.

When asked about the restoration of service when an outage occurs, IP's residential and non-residential customers rated the Company 8.24 and 8.48.



B) A report of the jurisdictional entity's implementation of its plan filed pursuant to subsection (b)(3)(A) of this Section for the previous annual reporting period, including an identification of significant deviations from the first year of the previous plan and the reasons for the deviations.

The following table summarizes the initiatives that were identified in the Company's 2001 annual reliability report. The table includes all required information.

Table 10 Identified Initiatives for 2002

Identified Initiatives for 2002	Comments
Continue to build new designs with adequate lightning and animal protection.	Review and update Standards as appropriate – Accomplished
Investigate Lightning Protection Schemes.	Pilot a program on 2001 WPCs with lightning outages. Remediation includes removing stingers, evaluate placement against current industry standards – <b>Accomplished</b>
Forestry	IP will trim 220 circuits in 2002 and accomplish a four- year trim cycle – <b>Accomplished</b>
Proactive Coordination of Circuits	64 Circuits are scheduled for implementation of identified improvements during 2002 – <b>Identified</b> improvements were implemented on 59 circuits; the other five circuits required no further action. IP will analyze 86 circuits in 2002 – 86 circuits were evaluated and 79 were found to be good candidates for a comprehensive study during 2002.
Animal Protection	In 2002 IP will animal guard 7 substations — 9 substations were enhanced with animal protection in 2002.
Patrol of WPCs	IP will pilot a program for WPC inspections. Osmose will be used for all 22 circuits, input analyzed for accuracy and timeliness of identifying and prioritizing deficiencies for corrective actions – <b>Accomplished</b>
Annual Circuit Patrols	IP will proactively patrol 25% of circuits during 2002 – <b>Accomplished</b>
Company-wide reliability goals	IP will track and internally communicate the progress of 2002 reliability goals – <b>Accomplished</b>
Substation Preventative Maintenance	Integrate Maximo and MMW programs - Accomplished
Improve restoration times.	Continue to assess resource needs by area. Continue to highlight employee understanding and process improvements – <b>IP continues with this initiative into 2003.</b>
Complete corrective actions	A small amount of work for a 2000 WPC will be



Identified Initiatives for 2002	Comments
needed on 2000 and 2001 WPCs.	completed in 2002. Complete all work on 2001 WPCs actions approved via Asset Management Process - All 2000 WPC work was completed and 98% of 2001 WPC work was completed. The remaining 2001 WPC work is scheduled for early 2003.
Customer Satisfaction Survey	Initiate and oversee contract with ODC to perform 2002 survey - <b>Accomplished</b>
System Improvements	Various as needed – Accomplished

C) The number and duration of planned and unplanned interruptions for the annual reporting period and their impacts on customers.

# Exhibit 411.120.b.3.C

The number and duration of planned and unplanned interruptions during calendar years 2000 through 2002 are shown in Table 11.

Table 11 Exhibit 411.120.b.3.C

Year	Category	Duration (hr)	CI	Events
2002	<b>Unplanned Interruptions</b>	1,889,789	681,934	15,918
2001	Unplanned Interruptions	1,685,055	765,434	17,510
2000	<b>Unplanned Interruptions</b>	2,718,298	968,205	19,262
2002	Planned Interruptions	151,457	109,716	3,700
2001	Planned Interruptions	177,097	133,152	4,401
2000	Planned Interruptions	128,488	99,168	3,585

The number of unplanned events in 2002 decreased by approximately 10% from the previous year. The number of customers interrupted also decreased by approximately 12%. The increase in duration is partially attributable to an increase in abnormal activity in 2002 as demonstrated by the IEEE Normalized Approach.

D) The number and causes of controllable interruptions for the annual reporting period.



# Exhibit 411.120.b.3.D

Outage causes classified as unknown and broken fuse link were changed to be classified as uncontrollable interruptions at the end of November. Therefore, the following table reflects 11 months of data on these categories which had been classified as controllable. Unclassified errors consist of an array of root causes which may be attributed to human or technology errors. Table 12 considers no exclusions in the presentation of this data.

Table 12 Exhibit 411.120.b.3.D

Interruption Cause Category	Number of Controllable Outages			Number of Controllable Customer Interruptions		
	2002	2001	2000	2002	2001	2000
Accident by IP or IP Contractor	26	57	43	2,099	8,915	4,015
Animals, Birds, Snakes, Other	4	6	2	94	154	83
Broken Fuse Link	47	101	91	871	1,161	985
Dig-in by IP or IP Contractor	9	16	6	86	135	67
Extreme Cold	15	8	11	468	364	197
Extreme Heat	17	63	14	456	6,746	251
Ice	20	4	35	3,295	4	1,387
Maintenance/Repair/Upgrade	24	36	19	3,049	451	158
OH Equipment Contamination	0	0	1	0	0	1
OH Equipment Malfunction	6	4	1	133	179	9
Scheduled Construction	0	1	0	0	1	0
Substation Equipment	1	1	0	751	1,008	0
Switching Error	32	30	18	7,409	9,351	8,031
Tree Contact Secondary	15	82	107	70	432	1,100
Tree Contact Primary	34	126	91	3,220	5,738	4,479
UG Equipment Malfunction	2	2	2	56	2	2
UG Failure	209	345	498	4,530	7,904	7,797
Unclassified Error	72	130	62	565	530	2,410
Unknown	59	227	178	6,576	18,741	8,716
Wind	5	0	0	423	0	0
Total	597	1,239	1,179	34,151	61,816	39,688

E) Customer service interruptions that were due solely to the actions or inactions of another utility, another jurisdictional entity, independent system operator, or alternative retail electric supplier for the annual reporting period.



# Exhibit 411.120.b.3.E

A summary of service interruptions due to the actions or inactions of others is included in Table 13.

Table 13 Exhibit 411.120.b.3.E

Year	Cause of Interruptions	Customer Minutes Interrupted	Customer Interruptions	Events
2002	Operating Event	973,931	10,066	11
2001	Operating Event	73,336	2,012	5
2000	Operating Event	250,411	4,647	5
2002	Loss of Supply	930,317	4,276	25
2001	Loss of Supply	159,888	2,814	16
2000	Loss of Supply	3,713,084	17,649	40

F) A comparison of interruption frequency and duration for customers buying electric energy from the jurisdictional entity versus customers buying electric energy from another utility or alternative retail electric supplier for the annual reporting period. A jurisdictional entity may base this comparison on each customer's supplier as of December 31 of each year. A jurisdictional entity need not include this information for customers whose electric energy supplier is not known to the jurisdictional entity.



# Exhibit 411.120.b.3.F

Table 14 provides a comparison of controllable and uncontrollable interruptions by IP and ARES

Table 14 Exhibit 411.120.b.e.F

	200	02	200	1	2000	)
	Illinois Power	ARES	Illinois Power	ARES	Illinois Power	ARES
Number of Controllable Customer Interruptions	34,151	0	61,815	1	39,652	36
Number of Uncontrollable Customer Interruptions	775,231	10	836,753	17	1,056,272	585
Controllable Interruption Minutes	3,436,096	0	4,374,758	214	3,850,191	2,287
Uncontrollable Interruption Minutes	121,278,092	3,062	107,352,419	1,752	171,162,034	100,254

G) A report of the age, current condition, reliability and performance of the jurisdictional entity's existing transmission and distribution facilities, which shall include, without limitation, the data listed below. In analyzing and reporting the age of the jurisdictional entity's plant and equipment, the jurisdictional entity may utilize book depreciation. Statistical estimation and analysis may be used when actual ages and conditions of facilities are not readily available. The use of such techniques shall be disclosed in the report.



# Exhibit 411.120.b.3.G

Table 15 Transmission Equipment Average Age

Account Title	Average Service Life	Average Age Years	Remaining Life Years	Life 0 to 10 Years	Life 11 to 20 Years	Life 21 to 30 Years	Life 31 to 40 Years	Life > 40 Years	Total
Structures and Improvements	57.0	22.7	34.3	1,363,928	439,301	2,056,628	493,635	550,512	4,904,004
Station Equipment	51.0	18.8*	32.2	41,874,259	11,550,596	18,274,598	11,072,721	8,568,151	91,340,325
Towers and Fixtures	45.0	33.4	11.6	214,782	586,384	4,686,312	8,287,624	1,413,558	15,188,660
Poles and Fixtures	49.0	17.6	31.4	31,088,407	13,372,657	19,584,563	6,654,986	5,333,558	76,034,171
Overhead Conductors and Devices	46.0	21.7	24.3	23,122,154	8,209,052	18,795,082	13,190,526	6,167,122	69,483,936

\*In IP's 2001 report this number was inadvertently adjusted for inflation and reported as 28.9. This is provided to explain the change from 2001 to 2002.

Table 16 Distribution Equipment Average Age

Account Title	Average Service Life	Average Age Years	Remaining Life Years	Life 0 to 10 Years	Life 11 to 20 Years	Life 21 to 30 Years	Life 31 to 40 Years	Life > 40 Years	Total
Structures and Improvements	60.0	20.0	40.0	5,540,279	1,629,463	2,129,690	1,670,239	1,493,052	12,462,723
Station Equipment	52.0	20.5	31.5	77,134,280	31,324,381	45,548,596	26,018,764	22,185,699	202,211,720
Poles, Towers and Fixtures*	31.0	13.3	17.7	166,635,428	76,029,166	51,944,903	19,678,896	0	314,288,393
Overhead Conductor and Devices*	35.0	14.2	20.8	143,426,185	64,535,080	46,896,759	26,380,647	0	281,238,671
Underground Conduit*	33.0	17.1	15.9	8,065,327	3,378,379	2,033,739	3,515,628	469,698	17,462,771
Underground Conductor and Devices*	23.0	9.8	13.2	104,254,418	26,898,164	17,185,695	0	0	148,338,277
Line Transformers*	43.0	15.6	27.4	110,393,953	60,953,189	53,590,829	26,588,973	0	251,526,944
Services*	31.0	15.0	16.0	52,138,600	35,202,384	30,683,743	5,653,919	0	123,678,646
Installation at Customer Premises**	NA	NA	0	0	0	0	0	0	0

<sup>\*</sup> These accounts are mass property and asset records are not kept by vintage. \*\* IP does not have any assets categorized in this account.



It is important to note that the age and depreciation information provided in Table 17 and Table 18 show data based upon the Company's last depreciation study, which was approved by the Commission in Docket No. 91-0147. Information provided in Table 15 and Table 16 reflects IP's accounts using 2002 data. Therefore, it is not possible to correlate the average remaining life using these two sets of tables due to the independent timeframes which they each represent.

In 1999, IP converted to a new system for property accounting purposes. To accommodate the conversion process, the mass distribution assets were assigned a 1998 vintage. This artificially inflated the life of the system in the "0 to 10 Years" category. To align assets into proper vintage categories, a manual review of property accounting records from 1960 through 2002 was completed and adjustments were made to Table 15 and Table 16 to more accurately reflect vintage information for reporting.

i) A qualitative characterization of the condition of the jurisdictional entity's system defining the criteria used in making the qualitative assessment, and explaining why they are appropriate.

The Company conducts a number of periodic patrols and performs corrective and preventative maintenance to keep the T&D system operating as designed. In addition, the Company established an Electric Operations Compliance group ("EOC") in 2000. EOC is charged with monitoring whether operations, maintenance and construction activities are being performed in a manner consistent with Company policies, procedures, programs, and processes. Based on the results of these patrols and maintenance activities, the Company believes that the T&D system has been constructed, operated, and maintained in a manner that should ensure safe and reliable operations of the system.

ii) A summary of the jurisdictional entity's interruptions and voltage variances reportable under this Part, including the reliability indices for the annual reporting period.

The reliability indices are reported in Section 411.120.b.3.H.

iii) The jurisdictional entity's expenditures for transmission construction and maintenance for the annual reporting period expressed in constant 1998 dollars, the ratio of those expenditures to the jurisdictional entity's transmission investment, and the average remaining depreciation lives of the entity's transmission facilities, expressed as a percentage of total depreciation lives.

IP uses information that is consistent with maintenance expenditures reflected in IP's FERC Form 1 Annual Report. Construction expenses are extracted from the Company's Property System. All expenditures are reported in loaded 1998 dollars.

While preparing the 2002 report, IP corrected the methodology used for calculating the transmission and distribution construction expenditures and investment figures. The expenditures in Table 17 and Table 18 now reflect actual cash outlays incurred during the respective years. In addition, post-1998 investment has been deflated to 1998 dollars.



Table 17 Transmission Construction and Maintenance

Item	2000	2001	2002
Transmission Construction and Maintenance Expenditures (in constant 1998 dollars) (000s)	\$13,701	\$18,386	\$13,538
Transmission Investment (000s)	\$247,680	\$236,858	\$254,537
Annual Expenditure Represents X% of Total Transmission Investment (Line 1/Line 2)	5.53%	7.76%	5.32%
Transmission System Average Remaining Life	27.5 – 38.6 yrs	27.5 – 38.6 yrs	
Total Depreciation Life of Transmission Plant	45 – 57 yrs	45 – 57 yrs	45 – 57 yrs
Percentage of Total Depreciation Life (Average of Line 4/Average of Line 5)	64.80%	64.80%	64.80%

iv) The jurisdictional entity's expenditures for distribution construction and maintenance for the annual reporting period expressed in constant 1998 dollars, the ratio of those expenditures to the jurisdictional entity's distribution investment, and the average remaining depreciation lives of the entity's distribution facilities, expressed as a percentage of total depreciation lives.

Requested information pertaining to the distribution plant is provided below and is consistent with IP's current breakdown with transmission assets.

Table 18 Distribution Construction and Maintenance

Item	2000	2001	2002
Distribution Construction and Maintenance Expenditures (in constant 1998 dollars) (000s)	\$105,298	\$110,086	\$110,602
Distribution Investment (000s)	\$1,222,445	\$1,276,371	\$1,337,064
Annual Expenditure Represents X% of Total Distribution Investment	8.61%	8.62%	8.27%
Distribution System Average Remaining Life	14.5 – 45.3 yrs	14.5 – 45.3 yrs	14.5 – 45.3 yrs
Total Depreciation Life of Distribution Plant	23 – 60 yrs	23 – 60 yrs	23 – 60 yrs
Percentage of Total Depreciation Life	72.05%	72.05%	72.05%

The information pertaining to "Average Remaining Life" and "Total Depreciation Life" will remain constant until such time as another study is completed.



v) The results of a customer satisfaction survey completed during the annual reporting period and covering reliability, customer service, and customer understanding of the jurisdictional entity's services and prices.

# **Customer Satisfaction Survey Results**

In 1998, as part of the adoption of Administrative Code Part 411, the Commission adopted a requirement that a standardized customer survey be developed and utilized by each electric utility. The ICC initiated a rulemaking to design and approve the survey. Opinion Dynamics Corporation ("ODC") was selected by a competitive bidding process to assist with the development and implementation of the initial survey.

ODC conducted a survey of 600 residential and 400 non-residential customers of Illinois Power. The survey addressed topics such as overall satisfaction, reliability performance, customer service performance, understanding of services, tree trimming performance, billing, and demographics/firmographics. The surveys were conducted between September 27, 2002 and November 26, 2002. The following graphs provide summaries of the results of this survey. Year-to-year comparisons for residential and non-residential information are provided. The tables that follow show survey results. A complete copy of the customer satisfaction survey conducted and prepared by ODC is provided as Attachment 1 to this report.

Survey data shows that Illinois Power customers are satisfied with their electric service. When asked specifically about the reliability of service, residential and non-residential customers scored Illinois Power at 8.72 and 8.73, respectively, on a scale of 1-10. IP's focus will continue to consider the impact of its operations on customers and their desire for reliable and efficient electrical service. Trending information is provided in the figures that follow.

# Illinois Power Residential 2002 Customer Satisfaction Survey

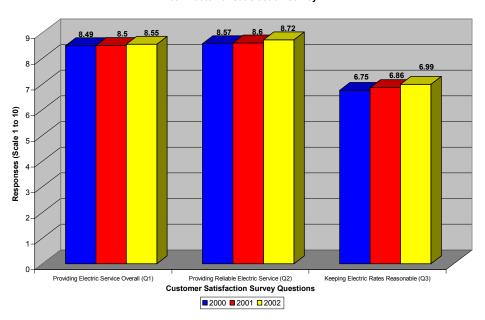


Figure 22 Residential Customer Satisfaction Survey Response to Q1-Q3

# Illinois Power Non-Residential 2002 Customer Satisfaction Survey

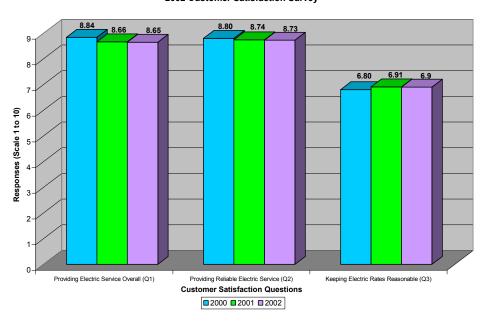


Figure 23 Non-Residential Customer Satisfaction Survey Response to Q1-Q3



# Illinois Power Residential 2002 Customer Satisfaction Survey

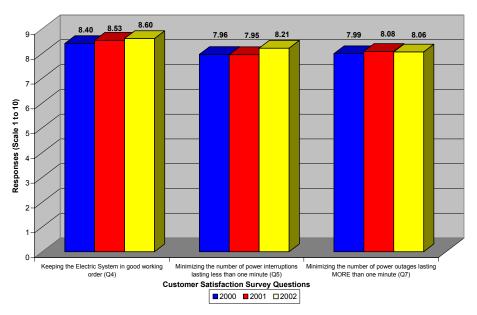


Figure 24 Residential Customer Satisfaction Survey Response to Q4, Q5, Q7

# Illinois Power Non-Residential 2002 Customer Satisfaction Survey

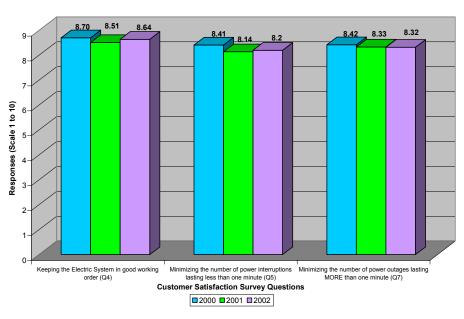


Figure 25 Non-Residential Customer Satisfaction Survey Response to Q4, Q5, Q7

#### Illinois Power Residential 2002 Customer Satisfaction Survey

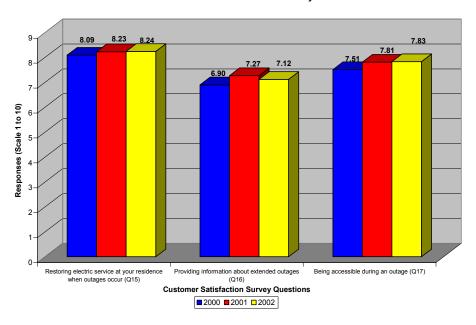


Figure 26 Residential Customer Satisfaction Survey Response to Q15-Q17

#### Illinois Power Non-Residential 2002 Customer Satisfaction Survey

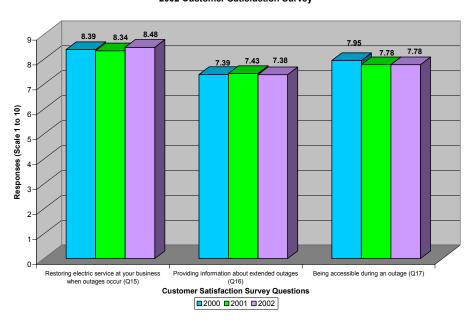


Figure 27 Non-Residential Customer Satisfaction Survey Response to Q15-Q17



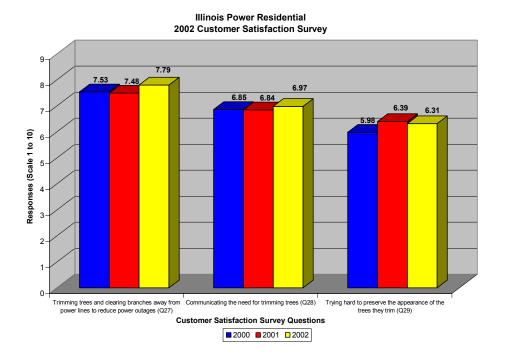


Figure 28 Residential Customer Satisfaction Survey Response to Q27-Q29

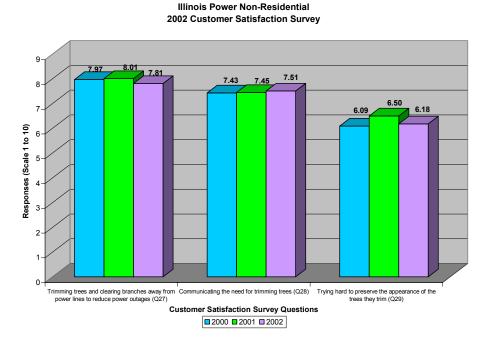
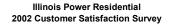


Figure 29 Non-Residential Customer Satisfaction Survey Response to Q27-Q29

# 51



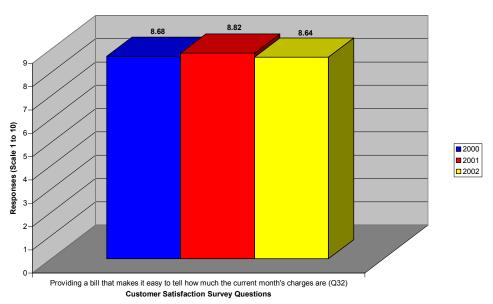


Figure 30 Residential Customer Satisfaction Survey Response to Q32

#### Illinois Power Non-Residential 2002 Customer Satisfaction Survey

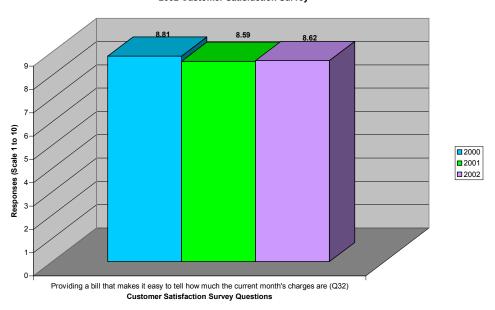


Figure 31 Non-Residential Customer Satisfaction Survey Response to Q32



vi) An overview pertaining to the number and substance of customers' reliability complaints for the annual reporting period and their distribution over the jurisdictional entity's operating areas.

# **Customer Complaints**

# **2002 Customer Complaint Summary**

Table 19 2002 Customer Complaint Summary

Customer Complaints 2002	Explanation
9192178330 James R. Allen Wood River Power Surges 4/3/2002	IP investigated and found no problems on company equipment.
2196589012 Terry D. Plovich Staunton 4/8/2002 Low Voltage	IP assessed the situation and installed a new service line.
7383792744 M.S. Rao Belleville 7/31/2002 Outages	IP assessed the situation and replaced underground cable.
7532453416 Donald Sodam Collinsville 8/1/2002 Outages & Flickering Lights	IP investigated and corrected the cause of the outage and flickering lights.
6402530964 Betty L. Farrar Belleville 8/30/2002 Frequent Outages	IP investigated and corrected the cause of the outages.
0955847306 Good Samaritan Home Flanagan 9/3/2002 Low Voltage & Flickering Lights	IP tested and advised customer to reset tolerances for chiller unit.



9443685666 Larry Eugene Savage Fillmore 9/17/2002 Outages	IP investigated and corrected the cause of the outages.
2535372388 Don E. Cox Danville 9/17/2002 Numerous Outages	Customer experienced seven outages between January and August 2002. Five were weather related, one vehicle related, and one equipment failure. IP spoke with customer and advised of reason for outages.
1173270535 David E. Hulsizer Galesburg 9/26/2002 Outage	IP spoke with customer and advised outage was storm related.
1713508421 George M. Piasecki Danville 10/7/2002 Lengthy Outage	IP spoke with customer and advised outage was due to multiple problems on circuit as result of storm damage.
5559637129 Gerald Kearney Danville 12/26/2002 Power Surges	IP investigated and corrected the cause of the voltage problem.

Figure 32 shows the distribution of the 2002 customer complaints across IP service territory.

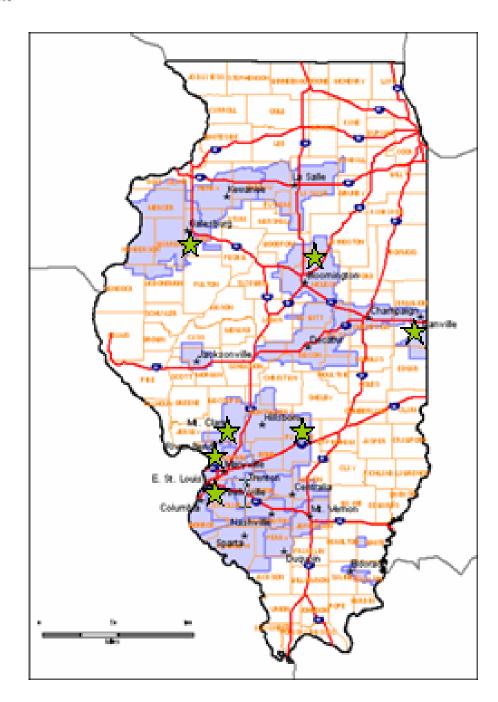


Figure 32 Geographic Location 2002 Customer Complaints

vii) The corresponding information, in the same format, for the previous three annual reporting periods, if available.



# **2001 Customer Complaint Summary**

Table 20 2001 Customer Complaint Summary

Customer Complaints 2001	Explanation
2028339177 Brett S. Duncan Mt. Zion Repeated outages 1/2/2001	IP assessed the situation and replaced 2300' of underground primary cable. Work Request #2521324696 closed on 4/5/01.
9001664909 Darrell S. Williams Belleville Outages 6/7/2001	Customer experienced several short outages. IP notified customer that the transformer had been replaced and squirrel guards added.
0255847306 Good Samaritan Home Flanagan Brown outs and Surges 8/1/2001	Customer notified IP that frequent outages and surges had damaged their chiller unit. IP met with customer and tested the voltage. Non-IP problem. Advised customer to reset the tolerances on their chiller unit and offered to obtain vendor information for them. Customer appreciative of IP efforts.
1965276967 Don Zehr Flanagan Dimming Lights 8/27/2001	No actual outages were experienced during 2001, however IP recognizes the reliability issues with some Flanagan customers and is committed to making improvements. IP investigated the cause of the dimming lights and made appropriate corrections.
7532453416 Virginia Troxel/ Daniel Nino Flanagan Outages and Dimming Lights 8/28/2001	See Don Zehr response.
Non-IP Customer Rick & Vonda Stephenson Edwardsville Multiple Outages 8/28/2001	Multiple outages were experienced by the customer over one weekend. Her Co-op had added incremental load without IP knowledge, causing substation relays to overload during the hot weather. IP upgraded relays in the substation to correct the problem.
9241912460 Paul Bertsche Flanagan Repeated Outages 8/31/2001	See Don Zehr response.
3010812873 Kenneth Erwin Trenton Excessive Outages 9/12/2001	Customer experienced numerous outages. IP investigated and corrections were made. Customer was notified.



Customer Complaints 2001	Explanation
3881869793 John Michael Bates Champaign Excessive Outages 10/9/2001	Customer states experienced numerous outages during July and August. IP contacted the customer to discuss concerns and that outages were weather related.
3929793692 Mattie L. Williams Champaign Frequent Outages 10/17/2001	IP spoke with the customer and advised outages have been caused by lightning and animals. Animal guarding in the customer's zone of protection was completed in February 2002 on Work Request #6777566495.
2065597311 Roma Chenoweth Champaign Outage and Tree Trimming Letter 10/21/2001	Customer was concerned about tree trimming and recent outages. Customer experienced two outages – one caused by wind and the other a blown fuse which was lightning related. Trees were trimmed to resolve the wind related outage concern.
6698765370 J.D. Harrold Clinton Frequent Outages 10/22/2001	Customer experienced two lengthy outages due to failed underground cable. IP investigated and installed new underground cable.



# **2000 Customer Complaint Summary**

Table 21 2000 Customer Complaint Summary

<b>Customer Complaints</b> 2000	Explanation
Christine Boswell Marseilles Request to replace 9/11/2000	Customer has older 3-wire 60-amp service that she wanted replaced. We explained to her that she must first upgrade the service entrance before we could replace the older service wire. She will advise us if she upgrades her service entrance.
Steve Crites Granite City Flickering lights 8/21/2000	Most of customer reliability problems are storm related; one outage caused by a fire at Venice Power Plant which affected the transmission line serving the area; some problems due to energy load imbalance condition which has been mitigated.
Citation Oil & Gas Odin Frequent curtailments 3/27/2000	All curtailments taken at the Salem Plant were in accord with the Power Supply Agreement between IP and the customer, Citation Oil & Gas
Citation Oil & Gas Odin Objects to outage 6/30/2000, 8/14/2000	The specific outage of 6/30 was caused by CIPS line outage. A subsequent outage on 7/31 was caused by loose jumper cables at the Texas Substation.
Kevin Drohan Normal Frequent outages 8/31/2000	Outages were isolated to several spans of underground cable in the subdivision, which was replaced by IP the first of October 2000. The Company mailed a letter of explanation on the outage cause and mitigation to all customers in the subdivision affected by this condition.
Linden Harms Normal Frequent outages 8/31/2000	Outages were isolated to several spans of underground cable in the subdivision, which was replaced by IP the first of October 2000. The Company mailed a letter of explanation on the outage cause and mitigation to all customers in the subdivision affected by this condition.
Andreas Matoesian Edwardsville Outage of 8/27/00 8/30/2000	Customer was out of service for 24 hours and concerned that IP records did not show her "Life Support." Reason: the customer failed to complete the annual re-certification of life support needs; therefore, the account was removed from the "Life Support" registry. After notification from customer the re-certification was processed and the account updated as "Life Support." An IP customer service administrator reminded the customer of her responsibility to have alternate plans in the event of prolonged power outages.
Charles McGorray Decatur Frequent outages 6/16/2000	Service to customer's neighborhood was affected by momentary "blinks". The level of service was improved greatly after the Company isolated an industrial load from the line serving the customer's neighborhood.



<b>Customer Complaints</b> 2000	Explanation
Sharon Pettegrew Champaign Excessive outages 9/19/2000	Replaced underground primary cable.
Ed Raycraft Hudson Outage for long period. 12/18/2000	Repairs were awaiting the delivery of a replacement transmission pole from another location. To prevent another delay in the event of similar outages a spare replacement pole was delivered to a nearby storage area.
Robert Swiatek Edwardsville Frequent outages 10/26/2000	As explained to customer, four (4) recent outages he experienced were animal related, blown transformer, fuse, and weather related (2). While these outages are beyond IP's control, the commitment is to restore service as quickly as possible.
John Sekula LaSalle Excessive outages 9/13/2000	Line providing service to customer's subdivision was replaced 9/18/00 and will improve future reliability.
Cathy Schnelker Urbana Brief outage 12/28/2000	There was a momentary outage caused by a small animal in transformer causing line fault. Customer was concerned it was "Y2K" related.
Gerald Whitmore Galesburg Poor service quality 9/11/2000	Most of the outages recorded on this service are momentary OCR operations. Actual measured outages are few.
Jim Wilson Columbia Voltage complaint 8/17/00	Recording voltmeters set for seven days. The results demonstrate steady voltage at 122 volts. No voltage drop or blinks were noted during this period.



# **1999 Customer Complaint Summary**

Table 22 1999 Customer Complaint Summary

Customer Complaints 1999	Explanation
Laura Carlanell Urbana 6125487896 Repeated Outages 10/14/99	IP's prior responses to past outages with repairs on the underground cable did not fix the problem. After resolving issues of right-of-way with out-of-town owners of the trailer park, the Company replaced the underground cable and transformer on 11/12/99.
William Drobny Bloomington 4975166551 Frequent Outages 12/10/99	The Company recognized a need to improve reliability of service in customer location and in fact commenced doing so late in 1998 and early 1999. IP rebuilt the main line in this neighborhood and installed new underground switchgears to balance load for improved reliability. Responding to the recent outage we replaced faulty U.G. primary cable, installed new transformer, and reset breaker settings to help isolate any future problems. Work completed by 12/17/99.
Steven Janssen Bunker Hill 9976134923 Voltage Complaint 9/6/99	Complaint isolated to customer premise. IP had repeatedly responded to customer complaints of "power surges" and "flickering lights" in 1999. Each time we advised the customer of his need to upgrade his old 100-amp service, which has corroded connections, with newer 200-amp service entrance.
Jay Lewis Mt. Vernon 0028769735 Flickering Lights	Customer outage history confirms some outages caused by small animals getting into IP equipment. To help mitigate the problem the Company developed a plan to: trim trees; add protective equipment and squirrel guards; install two line fuses; and reset relay settings. Work to be completed after 1/3/00.
William Rennie Danvers 1373663552 Low Voltage 1/11/99	A 1/1/99-winter storm caused damage to IP's transmission line that serves Danvers. At this time, service to Mr. Rennie had been interrupted, and his subsequent claims for damages to his refrigerator were denied by IP.

H) A table showing the achieved level of each of the three reliability indices of each operating area for the annual reporting period (provided, however, that for any reporting period commencing before April 1, 1998, a jurisdictional entity will not be required to report the CAIFI reliability index).



# Exhibit 411.120.b.3.H

Table 23 shows the Company's performance from 2000 to 2002.

Table 23 Three-Year Comparison of SAIFI and CAIDI

Year	SAIFI	CAIFI	CAIDI
2002	1.15	1.96	166
2001	1.29	2.10	133
2000	1.65	2.47	168

I) A list showing the worst-performing circuits for each operating area for the annual reporting period with the understanding that the designation of circuits as "worst-performing circuits" shall not, in and of itself, indicate a violation of this Part.



# Exhibit 411.120.b.3.I

# **2002 Worst Performing Circuits**

Table 24 shows the worst performing circuits for 2002. The values in bold represent the indices that caused the circuit to be a worst performer.

Table 24 Exhibit 411.120.b.3.I - Full List

Area Name	Area	Circuit	SAIFI	CAIFI	CAIDI
Belleville	51	124	2.93	3.00	122
Belleville	51	132	3.05	3.61	241
Belleville	51	163	5.85	6.02	139
Belleville	51	268	3.18	3.39	134
Bloomington	31	134	0.11	1.00	1765
Bloomington	31	204	2.90	3.12	918
Bloomington	31	211	3.25	3.48	325
Bloomington	31	217	1.38	1.94	923
Champaign	32	142	2.91	3.17	114
Danville	34	184	0.44	1.00	1048
Decatur	35	218	0.18	1.00	1020
Granite City	64	310	0.27	1.00	744
<b>Granite City</b>	64	403	2.76	3.22	73
Hillsboro	66	850	4.05	4.26	168
Hillsboro*	66	856	2.85	3.15	102
Hillsboro	66	879	0.02	1.00	731
LaSalle	13	510	2.94	2.99	118
Maryville	54	380	0.01	1.00	744
Mt. Vernon	72	128	0.87	1.00	868
Sparta	73	935	5.57	5.63	71

<sup>\*</sup>Hillsboro 856 was a worst performing circuit in 2001, with a SAIFI of 3.70 and a CAIFI of 3.78. Work performed on this circuit in 2002 is contributing to the improving trend in reliability performance.

The next tables show the 2002 Worst Performers performance for the last three years up to the current reporting year.



Table 25 Exhibit 411.120.b.3.I - SAIFI 2000-2002

Area Name	Circuit	2002	2001	2000
Belleville	163	5.85	2.74	4.87
Sparta	935	5.57	1.89	0.03
Hillsboro	850	4.05	1.74	0.94
Bloomington	211	3.25	1.43	4.54
Belleville	268	3.18	1.23	1.38
Belleville	132	3.05	1.27	2.26
LaSalle	510	2.94	1.70	2.34
Belleville	124	2.93	1.24	1.27
Champaign	142	2.91	0.02	0.32

Table 26 Exhibit 411.120.b.3.I - CAIFI 2000-2002

Area Name	Circuit	2002	2001	2000
Belleville	163	6.02	2.91	5.07
Sparta	935	5.63	1.94	1.27
Hillsboro	850	4.26	2.21	1.38
Belleville	132	3.61	1.39	2.66
Bloomington	211	3.48	2.08	4.67
Belleville	268	3.39	2.08	2.18
<b>Granite City</b>	403	3.22	2.08	4.30
Champaign	142	3.17	1.33	1.00
Hillsboro	856	3.15	3.78	1.05

Table 27 Exhibit 411.120.b.3.I - CAIFI 2000-2002

Area Name	Circuit	2002	2001	2000
Bloomington	134	1765	96	0
Danville	184	1048	0	0
Decatur	218	1020	73	0
Bloomington	217	923	147	1054
Bloomington	204	918	162	330
Mt. Vernon	128	868	113	49
<b>Granite City</b>	310	744	0	61
Maryville	380	744	298	158
Hillsboro	879	731	54	17



J) A statement of the operating and maintenance history of circuits designated as worst-performing circuits; a description of any action taken or planned to improve the performance of any such circuit (which shall include information concerning the cost of such action); and a schedule for completion of any such action. (The jurisdictional entity may decide, based on cost considerations or other factors, that it should take no action to improve the performance of one or more circuits designated as worst-performing circuits. If the jurisdictional entity decides to take no action to improve the performance of one or more circuits designated as worst-performing circuits, the jurisdictional entity shall explain its decision in its annual report.)

### **2002 Worst Performing Circuit Detail**

IP contracted with a nationally recognized firm to perform circuit inspections on most of the 2002 WPCs. Results yielded information on various maintenance activities needed on all circuits inspected, including missing or defective crossarm pins and penta bolts, blown lightning arresters, broken ground wires, missing guy guards, loose hardware and wires, leaning poles and crossarms, and woodpecker holes. Deficiencies were corrected using broad work requests. Following is a description of the more specific corrective actions for each circuit. Each graph shows the percentage of customers interrupted ("CI") and customer minutes interrupted ("CMI") by cause code for 2002.



## Belleville 124 - 2002 WPC

This circuit was a worst performer from a SAIFI perspective. It serves 1,035 customers at 12.47kV and is all overhead. Based on the customer density per circuit mile it is considered an urban circuit. Figure 33 shows the percentage of CI and CMI by cause in 2002.

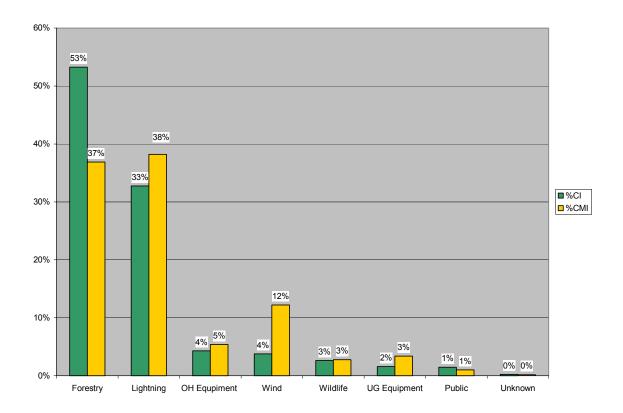


Figure 33 2002 Belleville 124 Performance by Cause

Forestry was the leading cause of customer interruptions in 2002. There were four tree-related outages on this circuit. One was due to the high winds on March 9<sup>th</sup>. The other three forestry outages affected the entire circuit, where it either locked out two or three phases of the circuit during each outage. There was one large lightning-related outage that affected the entire circuit. This circuit was patrolled in 2003. Lightning arresters were found to be adequate and operable. Some animal guards will be installed or changed out at an estimated cost of \$9,026 in constant 1998 dollars. The circuit was last trimmed in 2001.

## Belleville 132 - 2002 WPC

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 1,173 customers at 12.47kV and is primarily overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 34 shows the percentage of CI and CMI by cause in 2002.

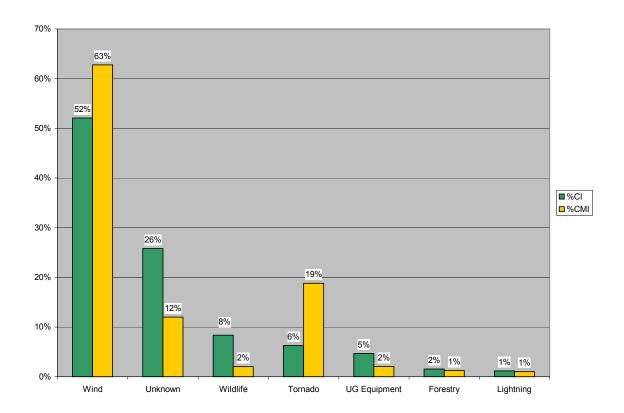


Figure 34 2002 Belleville 132 Performance by Cause

Wind was the leading cause for this circuit being a worst performer. One wind outage was on April 28<sup>th</sup>, which was the same day that a tornado hit this circuit. As a result of the tornado damage, an estimated cost of \$245,515 in constant 1998 dollars was spent on restoration efforts. This cost includes a few dollars on another circuit and some 34.5kV poles being changed, but the vast majority of work was on circuit 132. Another wind-related outage occurred during a storm on June 11<sup>th</sup>. Animals were also a concern on this circuit. Due to the circuit having a higher SAIFI, IP chose to have a coordination study completed. Implementation of the study's recommendations will be completed in 2003 at an estimated cost of \$1,759 in constant 1998 dollars. As a result of the patrol in 2003, animal guards will be installed as needed. Many maintenance items will be addressed, including some underground facilities. A few poles will be changed out or C-trussed. This work will be completed at a cost of \$11,757 in constant 1998 dollars. The circuit was last trimmed in 2000.



## Belleville 163 - 2002 WPC

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 768 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 35 shows the percentage of CI and CMI by cause in 2002.

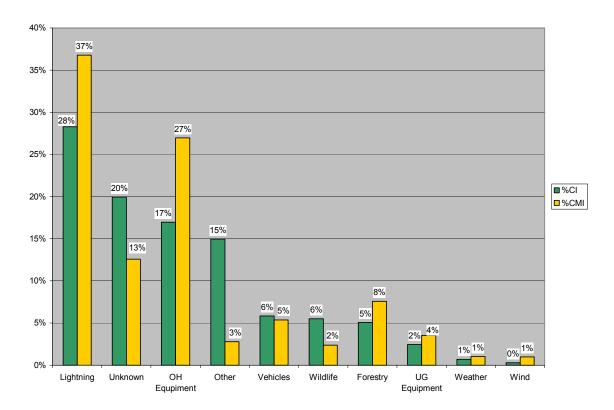


Figure 35 2002 Belleville 163 Performance by Cause

This circuit was also a worst performer in 2000. As a result of being a WPC in 2000, a major effort was taken to correct deficiencies. Some work was completed in 2001 but the vast majority of work was completed in 2002. The work completed in 2002 was done at a cost of \$88,992 in constant 1998 dollars. In 2002, lightning was the leading cause of outages. The largest contributing lightning problem occurred during a storm on June 11<sup>th</sup> where lightning took out all three phases at the substation. The next leading cause was unknown. This single outage also affected all three phases at the substation. The line was patrolled but nothing was found to have caused this outage. Due to its performance the past several years, IP chose to perform a coordination study on this circuit. Recommendations from this study will be implemented in 2003 at a cost of \$8,054 in constant 1998 dollars. This circuit was patrolled in 2003. Findings consisted of several bad crossarms and several poles that will be changed out or C-trussed. Several blown arresters or defective ground wires were found and corrected which should enhance lightning protection. This circuit traverses a rural area that has many trees throughout the path of the circuit. There were also various maintenance items found that will be



addressed. This work will be performed at an estimated cost of \$48,206 in constant 1998 dollars. The patrol also identified many poles that contain some decay and woodpecker holes. Some of the decayed poles will either be replaced or reinforced by C-truss while other decayed poles still remain sound. The area will assess the woodpecker holes and follow up as appropriate. This circuit was last trimmed in 2002.



## Belleville 268 - 2002 WPC

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 829 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 36 shows the percentage of CI and CMI by cause in 2002.

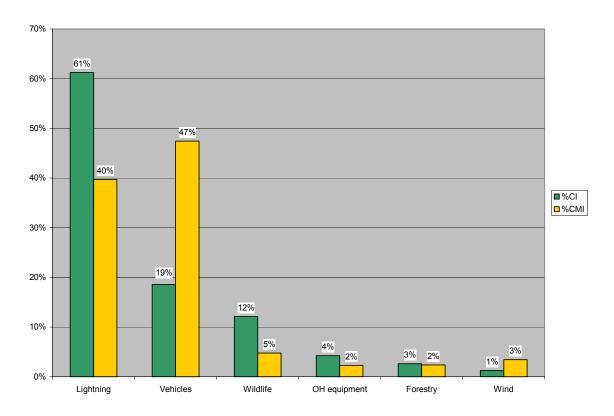


Figure 36 2002 Belleville 268 Performance by Cause

During 2002, this circuit did experience a variety of outages at different times, with lightning being the leading cause. As a result of the patrol, several defective ground wires or blown arresters were found and corrected, which should improve lightning protection. Some poles will be replaced or C-trussed and animal guards will be installed where needed. This work will be completed at a cost of \$41,940 in constant 1998 dollars. In order to further improve circuit performance, IP also chose to perform a coordination study. The recommendations of the study are based on current and updated physical field attributes and will be implemented in 2003 at a cost of \$48,510 in constant 1998 dollars. The circuit was last trimmed in 2002.



# Bloomington 134 – 2002 WPC

This circuit was a worst performer from a CAIDI perspective. It serves 483 customers at 4.16kV and is almost all overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 37 shows the percentage of CI and CMI by cause in 2002.

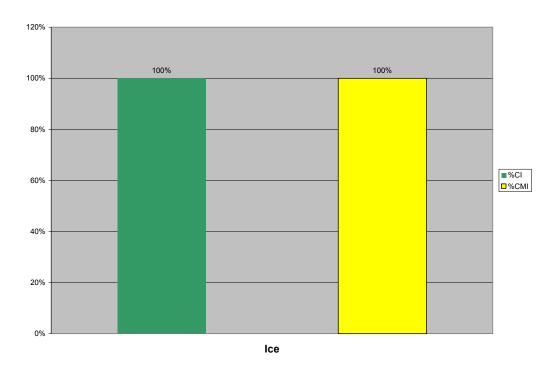


Figure 37 2002 Bloomington 134 Performance by Cause

The circuit experienced one outage in 2002 as a result of the ice storm in late January. Damage requiring restoration efforts was so widespread that the duration of this single outage caused it to be a worst performer. Even though the performance was excellent from a SAIFI and CAIFI perspective, IP still chose to patrol this circuit. As a result of the patrol, animal guards will be installed as needed. Only a handful of poles need to be addressed and various maintenance items need to be corrected. The cost of this work is estimated at \$12,594 in constant 1998 dollars. The circuit was last trimmed in 2002.



# **Bloomington 204 - 2002 WPC**

This circuit was a worst performer from a CAIDI perspective. It serves 765 customers at 12.47kV and is mostly overhead and covers a large geographic territory. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 38 shows the percentage of CI and CMI by cause in 2002.

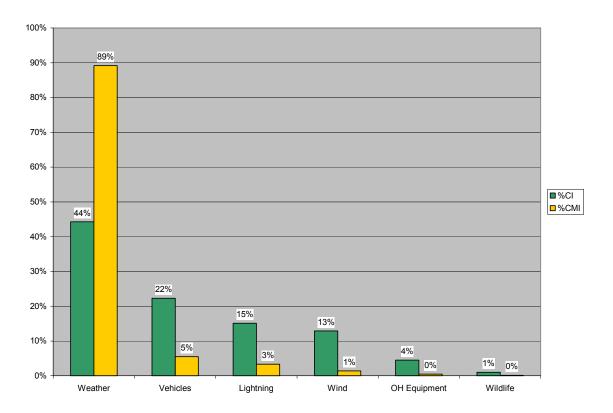


Figure 38 2002 Bloomington 204 Performance by Cause

This circuit did not have a high frequency of outages, but the ones that occurred due to weather or vehicle accidents affected a large number of customers. The weather-related event was from the ice storm that hit the central part of the state and affected many customers for an extended period of time. The circuit was patrolled in 2003. Deficiencies that were found and will be corrected consist of several poles to be changed and many to be C-trussed. Additionally, many defective crossarms were found and need to be replaced. There were also some defective ground wires and blown arresters found. IP chose to perform a coordination study. Recommendations will be implemented in 2003 at a cost of \$8,980 in constant 1998 dollars. Even though wildlife was not a contributing factor of this circuit becoming a WPC, animal guarding will be done to prevent future occurrences. This work will be completed at a cost of \$87,828 in constant 1998 dollars. The circuit was last trimmed in 2000.



# Bloomington 211 - 2002 WPC

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 912 customers at 12.47kV and is mostly overhead and covers a large geographical area. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 39 shows the percentage of CI and CMI by cause in 2002.

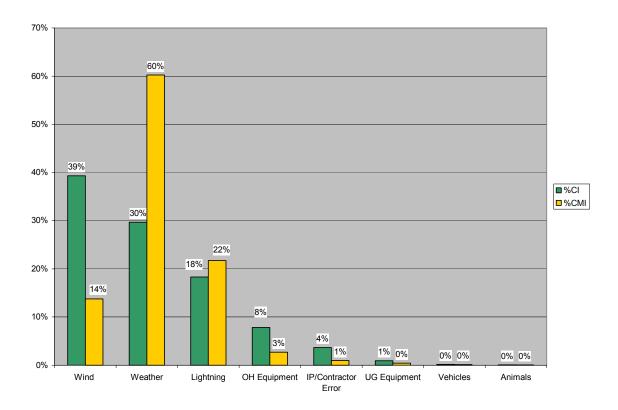


Figure 39 2002 Bloomington 211 Performance by Cause

Weather-related events accounted for 87% of the CI and 96% of the CMI on this circuit. Two major storms were responsible for this. One was the ice storm in late January, and the other was a large lightning storm. As a result of the patrol, many crossarms will be addressed, quite a few poles will be C-trussed, and several animal guards will be installed where missing. Defective ground wires or blown arresters will be corrected to help reduce the number of lightning-related outages. This work will be completed at an estimated cost of \$41,011 in constant 1998 dollars. This circuit was also a worst performer in 2000. The last tree trimming occurred in 2001.



# **Bloomington 217 - 2002 WPC**

This circuit was a worst performer from a CAIDI perspective. It serves 424 customers at 12.47kV and is almost all overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 40 shows the percentage of CI and CMI by cause in 2002.

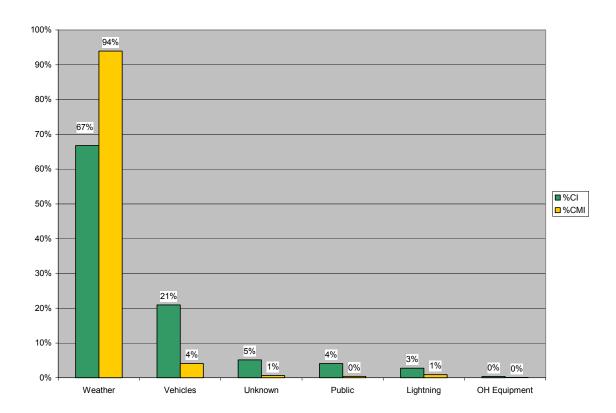


Figure 40 2002 Bloomington 217 Performance by Cause

If not for the ice storm in January 2002, this circuit would not have been a worst performer. Ice was the main weather-related event experienced by this circuit. The corrections made from the 2000 WPC patrol and the trimming completed in 2002 have resulted in no tree-related outages. As a result of the patrol, several bad poles and some crossarms will be changed out and other various maintenance items will be corrected at an estimated cost of \$27,402 in constant 1998 dollars.

# **Champaign 142 - 2002 WPC**

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 360 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 41 shows the percentage of CI and CMI by cause in 2002.

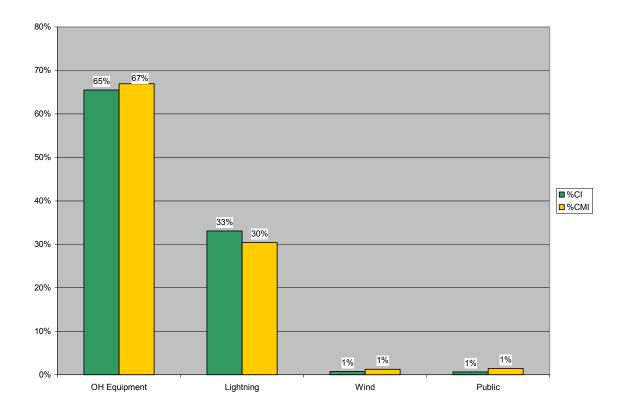


Figure 41 2002 Champaign 142 Performance by Cause

Overall, this circuit was a good performer with exception of two OH equipment malfunctions and one lightning-related outage that affected the entire circuit. The circuit was patrolled and corrections consist of one pole to change, one pole to C-truss and some maintenance activities to be addressed. This work will be done at an estimated cost of \$2,159 in constant 1998 dollars. IP also chose to perform a coordination study. Recommendations will be implemented in 2003 at a cost of \$5,462 in constant 1998 dollars. The circuit was last trimmed in 2002.



## **Danville 184 - 2002 WPC**

This circuit was a worst performer from a CAIDI perspective. It serves 188 customers at 4.16kV and is almost all overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 42 shows the percentage of CI and CMI by cause in 2002.

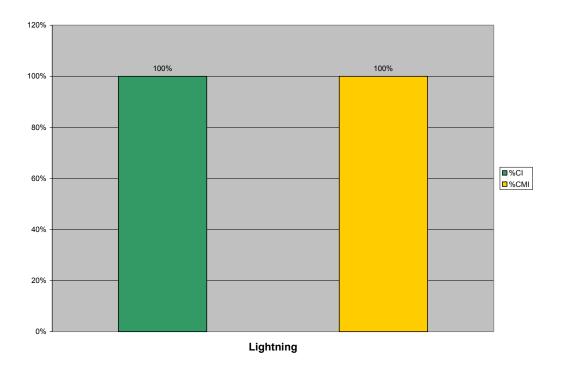


Figure 42 2002 Danville 184 Performance by Cause

This circuit experienced one outage due to lightning. This outage occurred on a day when the entire Danville area was experiencing a storm. This particular outage had an inflated duration due to storm restoration work to repair extensive damage on this circuit. The circuit has an excellent SAIFI and CAIFI for 2002. Regardless, this circuit was patrolled and findings consisted of the need to change out a few bad poles. The lightning protection was intact and operational for this circuit. This work will be completed at an estimated cost of \$4,721 in constant 1998 dollars. The circuit was last trimmed in 2002.



## **Decatur 218 - 2002 WPC**

This circuit was a worst performer from a CAIDI perspective. It serves 213 customers at 4.16kV and is all overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 43 shows the percentage of CI and CMI by cause in 2002.

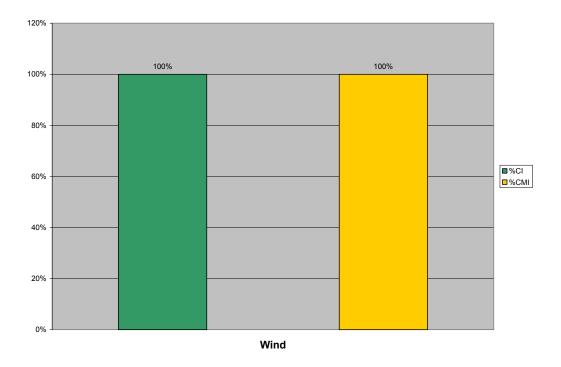


Figure 43 2002 Decatur 218 Performance by Cause

This circuit experienced two wind-related outages, both on the same day. The service area had many outages that day, and the durations of these two outages were inflated. Due to the small number of customers served, this created the high CAIDI and resulted in it being a worst performing circuit. The circuit was still patrolled, and as a result, one pole needs to be changed out and one C-trussed. There are also a few maintenance items to be addressed. This work will be completed at a cost of \$1,389 in constant 1998 dollars. The circuit was last trimmed in 2000.

# Granite City 310 - 2002 WPC

This circuit was a worst performer from a CAIDI perspective. It serves 164 customers at 4.16kV and is all overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 44 shows the percentage of CI and CMI by cause in 2002.

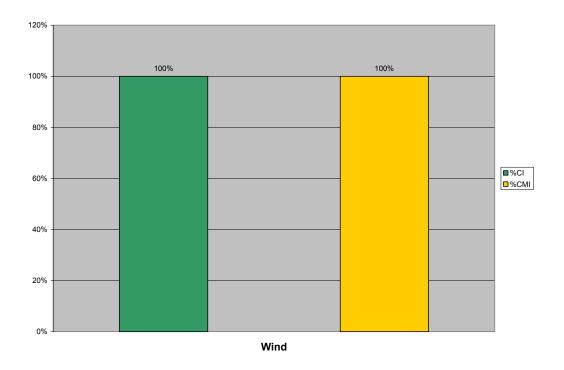


Figure 44 2002 Granite City 310 Performance by Cause

The circuit experienced one outage in 2002 that was due to wind. Restoration efforts during this storm inflated the CAIDI such that it made it a worst performer. The circuit is scheduled to be trimmed in 2003 and patrolled in 2004.



# Granite City 403 - 2002 WPC

This circuit was a worst performer from a CAIFI perspective. It serves 890 customers at 12.47kV and is about 50% overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 45 shows the percentage of CI and CMI by cause in 2002.

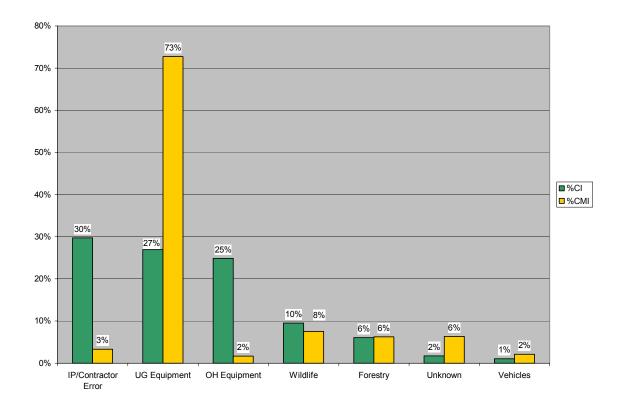


Figure 45 2002 Granite City 403 Performance by Cause

There were two separate errors made by IP/Contractor. The first outage occurred when the wrong switch in the substation was pulled and the entire circuit was inadvertently dropped. The second outage occurred when part of another circuit was being converted from 4kV to 12kV and added to this circuit. The crew missed changing an arrester to 12 kV. When energized, this caused an outage for approximately 60 customers. Individuals involved were counseled following the errors. The underground outage occurred on the main feeder out of the substation. This wire went bad and caused an outage on the entire circuit. Considering that this circuit is half underground primary, this single outage involving underground wire had a significant impact to customers. This circuit was patrolled in 2003 and corrective actions will be made. These corrections consist of a few poles to replace and C-truss, some animal guarding added, as well as some maintenance items on both overhead and underground facilities. This work will be completed at an estimated cost of \$16,926 in constant 1998 dollars. This circuit was last trimmed in 2000.



## Hillsboro 850 - 2002 WPC

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 597 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 46 shows the percentage of CI and CMI by cause in 2002.

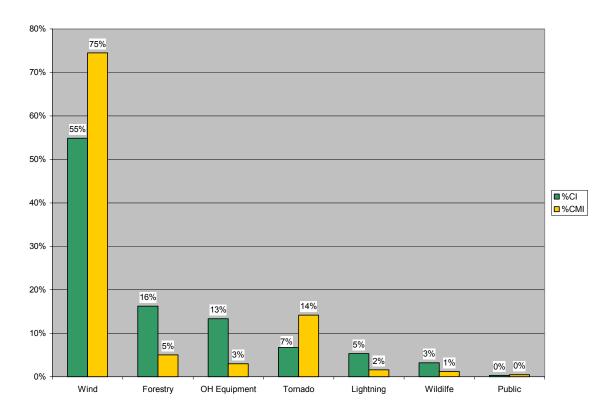


Figure 46 2002 Hillsboro 850 Performance by Cause

Several storms affected this circuit throughout the year and accounted for two-thirds of the customer interruptions. This circuit has performed well during the past few years. Deficiencies found range from replacing or C-trussing bad poles, replacing some blown lightning arresters and fixing a few broken ground wires, as well as installing some missing animal guards. Along with other maintenance items, these deficiencies will be corrected at a cost of \$62,781 in constant 1998 dollars. The circuit is currently being trimmed.

## Hillsboro 856 - 2002 WPC

This circuit was a worst performer from a CAIFI perspective. It serves 438 customers at 12.47kV and is almost all overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 47 shows the percentage of CI and CMI by cause in 2002.

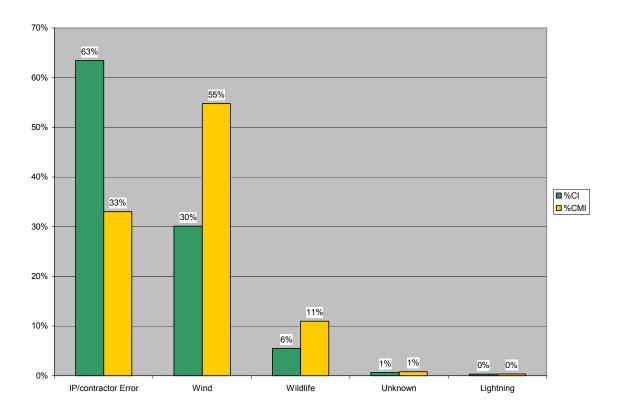


Figure 47 2002 Hillsboro 856 Performance by Cause

The leading cause of customer interruptions on this circuit was due to human error. While working on this circuit, the contractor opened an incorrect switch causing the entire circuit to lose power. The second outage occurred a few days later while working on the same job. The line was tripped back to the substation reclosers, causing a loss of power to the circuit. If not for these two outages, this circuit would not have been a worst performer. Individuals involved were counseled following the errors and the importance of reliability and safety was stressed.

Wind was the second leading cause of outages and the circuit experienced three wind storms resulting in outages. The topography is very flat across most of this circuit and subject to constant and strong winds. The circuit was patrolled and as a result several damaged crossarms will be replaced as well as a few poles. Some animal guards will be installed where missing and several maintenance items addressed. This work will be completed at a cost of \$43,440 in constant 1998 dollars. The circuit was last trimmed in 2002.



## Hillsboro 879 - 2002 WPC

This circuit was a worst performer from a CAIDI perspective. It serves 238 customers at 12.47kV and is about 90% overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 48 shows the percentage of CI and CMI by cause in 2002.

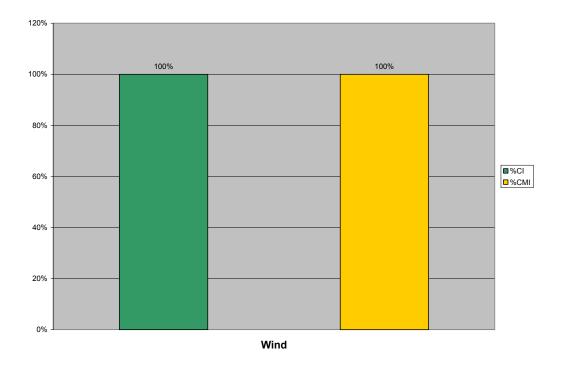


Figure 48 2002 Hillsboro 879 Performance by Cause

This circuit experienced one outage related to wind. A storm went through this section of the Hillsboro service territory. As a result, many outages occurred throughout the territory on various circuits and caused the duration to be inflated due to storm restoration efforts. If not for this outage, this circuit would not have been a worst performer. This circuit did experience an excellent SAIFI and CAIFI during the year. Findings from the patrol will be addressed and include some poles to change out, one crossarm to replace and some maintenance items on the overhead and underground lines. This work will be completed at an estimated cost of \$7,936 in constant 1998 dollars. The circuit was last trimmed in 2002.



## **LaSalle 510 - 2002 WPC**

This circuit was a worst performer from a SAIFI perspective. It serves 862 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 49 shows the percentage of CI and CMI by cause in 2002.

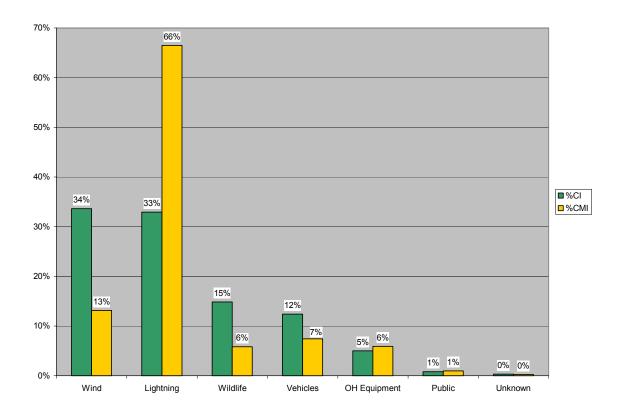


Figure 49 2002 LaSalle 510 Performance by Cause

This circuit had a variety of outages, with the largest ones due to weather on several different occasions. One of three lightning outages affected the entire circuit. The circuit has an adequate number of arresters installed per standard. As a result of the patrol, a few broken ground wires were found and will be fixed and many poles were found deficient and will be replaced or C-trussed. Extensive animal guarding will also be installed on the circuit. Along with some other maintenance items, this work will be completed at a cost of \$47.373 in constant 1998 dollars. This circuit is scheduled to be trimmed in 2003.



# Maryville 380 - 2002 WPC

This circuit was a worst performer from a CAIDI perspective. It serves 649 customers at 4.16kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered an urban circuit. Figure 50 shows the percentage of CI and CMI by cause in 2002.

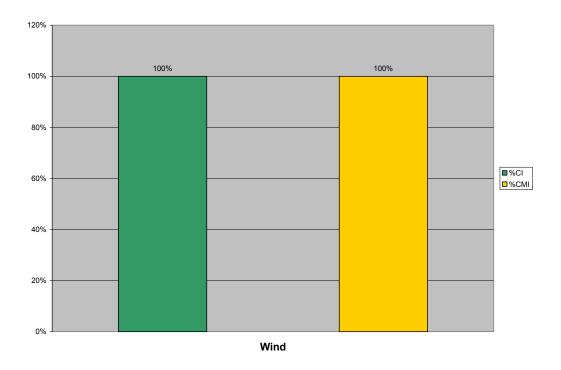


Figure 50 2002 Maryville 380 Performance by Cause

This circuit experienced one outage on June 11<sup>th</sup> due to wind. The outage affected a small number of customers on this particular circuit, however, the storm that rolled through the Metro and Hillsboro areas that same day affected over 11,000 customers in total. Because IP prioritizes storm repair work to restore service first to the largest number of affected customers, other outages affecting more customers were restored before this circuit. This inflated the duration of this small outage and caused it to be a worst performer. The circuit will be trimmed in 2003 and patrolled for maintenance in 2004.

# Mt. Vernon 128 - 2002 WPC

This circuit was a worst performer from a CAIDI perspective. It serves 314 customers at 4.16kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 51 shows the percentage of CI and CMI by cause in 2002.

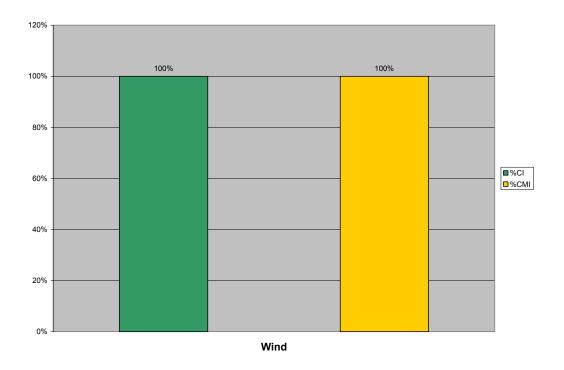


Figure 51 2002 Mt. Vernon 128 Performance by Cause

This circuit experienced one outage in 2002 due to wind. The wind blew a tree over, which tore down the primary lines. Due to this abnormal storm event throughout the Mt. Vernon service area, the duration of this outage was inflated, causing the circuit to be a worst performer. This circuit was last patrolled and trimmed in 2002.

# **Sparta 935 - 2002 WPC**

This circuit was a worst performer from a SAIFI and CAIFI perspective. It serves 520 customers at 12.47kV and is mostly overhead. Based on the number of customers per circuit mile, it is considered a rural circuit. Figure 52 shows the percentage of CI and CMI by cause in 2002.

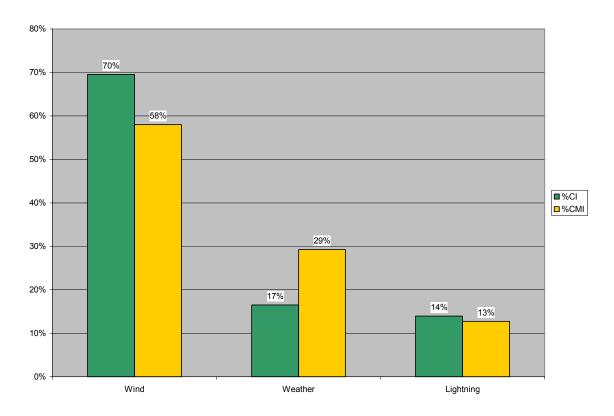


Figure 52 2002 Sparta 935 Performance by Cause

All events on this circuit were due to weather-related causes. The weather-related outage was from the river flooding which caused three poles to fall and lock out the entire circuit. Lightning arresters and ground wires were found intact and operational. The circuit patrol findings resulted in a few poles to be changed out and some to be C-trussed. Along with various maintenance items, the identified work will be completed at a cost of \$9,369 in constant 1998 dollars. The circuit was last trimmed in 2001.



# **2001 Worst Performing Circuit Remediation**

Table 28 shows the 2001 WPC's and their performance in 2000, 2001, and 2002. The following paragraphs cover projects performed on each of these circuits.

Table 28 2001 WPC Indices

2001 Worst Performing Circuits		2000 Performance		2001 Performance			2002 Performance				
Area Name	Area	Circuit	SAIFI	CAIFI	CAIDI	SAIFI	CAIFI	CAIDI	SAIFI	CAIFI	CAIDI
BELLEVILLE *	51	101	0.88	1.00	890	0.04	1.00	894	0.89	1.00	70
BELLEVILLE	51	217	0.95	1.12	97	3.80	4.25	60	0.22	1.20	54
BELLEVILLE	51	242	2.52	2.54	290	5.97	6.16	61	0.12	1.08	213
BELLEVILLE	51	249	2.36	2.56	189	1.40	4.19	133	1.04	1.94	389
BELLEVILLE	51	298	0.86	2.41	251	3.57	3.80	447	2.00	2.44	217
BLOOMINGTON	31	240	2.16	2.16	519	3.36	3.38	180	0.46	1.00	54
BLOOMINGTON	31	256	0.17	1.00	85	0.06	1.00	822	0.00	0.00	0
CHAMPAIGN	32	162	0.36	1.61	87	3.93	4.01	301	0.22	2.47	239
CHAMPAIGN	32	311	0.00	0.00	0	0.11	1.00	907	0.00	1.10	450
DANVILLE	34	121	0.96	1.08	81	0.05	1.00	639	0.05	1.00	122
GRANITE CITY	64	327	0.02	1.00	255	0.92	1.00	624	0.15	1.00	105
GRANITE CITY	64	329	0.40	2.00	502	0.23	1.00	567	0.33	1.00	123
HILLSBORO	66	807	1.78	1.90	124	3.33	3.52	72	0.37	1.18	218
HILLSBORO	66	855	0.07	1.00	96	3.79	3.90	84	0.96	1.05	153
HILLSBORO	66	856	0.61	1.05	160	3.70	3.78	124	2.85	3.15	102
LASALLE	13	161	3.74	3.86	376	1.01	1.08	757	0.70	1.17	60
LASALLE	13	522	1.29	1.50	245	2.63	3.85	92	1.31	1.93	75
MARYVILLE	54	384	0.01	1.00	49	1.08	1.20	697	0.00	0.00	0
MARYVILLE	54	409	0.59	1.91	163	4.78	4.96	173	1.25	1.40	202
MT. VERNON	72	101	1.81	1.97	60	0.15	1.00	652	0.30	1.00	107
MT. VERNON	72	185	1.01	2.39	173	3.29	3.44	118	1.21	1.63	114
SPARTA	73	923	0.23	1.00	42	0.16	1.00	603	0.00	0.00	0

## **Belleville 101**

In 2001, as a result of this circuit being a worst performer, the circuit was patrolled. Animal guards were installed, bad poles were replaced and maintenance items corrected at a cost of \$8,235 in constant 1998 dollars. This work was completed in 2002. As a result of being a WPC in 2000, lightning protection was installed on the circuit at a cost of \$3,932 in constant 1998 dollars and work was completed in 2001. The circuit was last trimmed in February 2002.



#### **Belleville 217**

Remediation plans consisted of replacing and C-trussing poles along with general maintenance and extensive animal guarding. This work was completed in 2002 at a cost of \$12,998 in constant 1998 dollars. The circuit was trimmed in September 2002.

# **Belleville 242**

This circuit was reviewed in detail during the lightning study. A field investigation was done at a particular section of the circuit. Ground impedance measurements were taken and a lightning arrester count was performed. The resulting remediation indicated was to replace approximately 800' of spacer cable. This project was approved in the fourth quarter of 2002 and was completed in early 2003 at a cost of \$42,383 in constant 1998 dollars. All work identified on the patrol was completed in 2002 at a cost of \$12,900 in constant 1998 dollars. The circuit is scheduled to be trimmed in 2003.

#### **Belleville 249**

This circuit was reviewed in detail during the lightning study. During the field investigation, a pole was identified as having been struck several times in the past. This pole was chosen for installation of a lightning dissipater to stop future strikes on this pole. It was also noted that this circuit is topographically located such that it is more susceptible to lightning strikes. Other plans resulting from the lightning study were to install more arresters throughout the entire circuit. This was completed in early 2003 at an approximate cost of \$15,885. As a result of the circuit patrol, all identified work was completed in 2002 at a cost of \$37,302 in constant 1998 dollars. The circuit was last trimmed in 2000.

#### **Belleville 298**

This circuit was reviewed in detail during the lightning study. Field investigations found a low number of arresters on the circuit mainly due to it being underbuilt on a 34.5kV line that has a static. Lightning arresters were installed on the underbuilt distribution. This work, along with installation of a set of reclosers, is scheduled to be completed in early 2003 at an estimated cost of \$7,655 in constant 1998 dollars. Maintenance items found during the 2002 patrol were completed in 2002 at a cost of \$8,718 in constant 1998 dollars. The circuit was last trimmed in March 2001.

## **Bloomington 240**

This circuit was on the list for a lightning study. Upon further review by the Lightning Analysis Team, it was decided not to review in detail due to the number of strikes and the impact of those strikes. A coordination study was completed in 2002 and corrective actions will be completed in 2003. The circuit was patrolled and remedial plans were completed in 2002. This work was completed at a cost of \$42,145 in constant 1998 dollars. The circuit was last trimmed in June 2001.



## **Bloomington 256**

During the lightning study, findings did not support a detailed review of this circuit due to the location of strikes. The circuit was patrolled and maintenance items were addressed in 2002 at a cost of \$16.188 in constant 1998 dollars. The circuit will be trimmed in 2003.

## Champaign 162

In 2002, a coordination study was conducted and recommendations completed in the field. Also, remedial plans as a result of the patrol were completed in 2002. All work was completed at a cost of \$1,795 in constant 1998 dollars. The circuit was last trimmed in August 2001.

## Champaign 311

Findings from the patrol were completed in 2002 at a cost of \$4,638 in constant 1998 dollars. The circuit was last trimmed in November 2000.

#### **Danville 121**

Upon completion of the patrol, maintenance items identified were corrected in 2002 at a cost of \$5,036 in constant 1998 dollars. The circuit was last trimmed in October 2002.

## **Granite City 327**

As a result of the lightning study, it was decided not to review this circuit in detail. However, as a result of the patrol, deficiencies were corrected in 2002 at a cost of \$10,447 in constant 1998 dollars. The circuit was last trimmed in 2003.

#### **Granite City 329**

This circuit was chosen for a detailed lightning study review. Upon field investigation, some broken ground wires were found in the area affected by lightning. These were corrected along with the other items identified on the patrol. All items were completed in 2002 at a cost of \$2,854 in constant 1998 dollars. The circuit was last trimmed in February 2000.

#### Hillsboro 807

All corrective actions identified were corrected in 2002 at a cost of \$30,641 in constant 1998 dollars. This circuit was last trimmed in June 2002.

## Hillsboro 855

A coordination study was completed with recommendations being implemented in 2003. As a result of the patrol, all identified corrective actions were completed in 2002. All coordination work will be completed at cost of \$8,360 in constant 1998 dollars. The circuit was last trimmed in January 2001.



#### Hillsboro 856

As a result of the lightning study, it was found that additional lightning arresters were needed. The addition of arresters was completed in early 2003 at a cost of \$9,276 in constant 1998 dollars. The corrective actions identified on the patrol were completed in 2002 at a cost of \$22,640 in constant 1998 dollars. This circuit was last trimmed in April 2002. Also as planned, a coordination study was completed in 2002 and work is scheduled to be completed in 2003 at a cost of \$12,775 in constant 1998 dollars.

#### LaSalle 161

This circuit was included in the lightning study. Upon field investigation, it was determined that the circuit needed additional lightning arresters. There were also some bad ground wires identified and corrected as a result. The lightning study recommendations are under construction and are scheduled to be completed in 2003 at a cost of \$44,759 in constant 1998 dollars. The majority of corrective actions identified on the patrol were completed in 2002 with some remaining work completed in early 2003 for a total cost of \$64,190 in constant 1998 dollars. The circuit was last trimmed in October 2001.

#### LaSalle 522

The circuit patrol was completed in 2002. Most deficiencies identified on the patrol were corrected in 2002 and early 2003 at a cost of \$76,843 in constant 1998 dollars. Trimming was last completed in 2003.

## Maryville 384

As a result of the patrol, corrective actions were completed in 2002 at a cost of \$6,577 in constant 1998 dollars. The circuit was last trimmed in March 2002.

#### Maryville 409

This circuit was chosen for a detailed lightning study review. It was identified that this circuit had the standard number of arresters installed and operational. It was decided to increase the number of arresters on the circuit and monitor its performance in 2003. This upgrade was completed in 2002 at a cost of \$10,984 in constant 1998 dollars. With the exception of raising and painting some padmount transformers, all corrective action items found on the patrol were corrected in 2002 at a cost of \$38,722 in constant 1998 dollars. The circuit was last trimmed in January 2002.

#### Mt. Vernon 101

Upon further review of this circuit during the lightning study, it was decided not to investigate this circuit in detail. The circuit was patrolled in 2002 and corrective actions were also completed in 2002 at a cost of \$9,730 in constant 1998 dollars. The circuit was trimmed in February 2000.



## Mt. Vernon 185

This circuit was included on the detailed investigation in the lightning study. Field audits revealed this circuit had fewer than the standard number of arresters. Installation of additional arresters is scheduled to be completed in early 2003 at a cost of \$15,502 in constant 1998 dollars. As a result of the patrol, most corrective action items were corrected in 2002 with the remainder completed in early 2003 at a cost of \$32,693 in constant 1998 dollars. The circuit will be trimmed in 2003.

## Sparta 923

After further review during the lightning study, it was decided not to review this circuit in detail. The patrol and corrective action items were completed in 2002 at a cost of \$9,815 in constant 1998 dollars. The circuit was last trimmed in January 2001.

# **2000 Worst Performing Circuit Remediation**

Table 29 shows the 2000 WPC's and their performance in 2000, 2001, and 2002. The following paragraphs cover projects performed on each of these circuits.

Table 29 2000 WPC Indices

2000 Worst Performing Circuits		2000 Performance		2001 Performance			2002 Performance				
Area Name	Area	Circuit	SAIFI	CAIFI	CAIDI	SAIFI	CAIFI	CAIDI	SAIFI	CAIFI	CAIDI
BELLEVILLE	51	101	0.88	1	890	0.04	1	894	0.89	1.00	70
BELLEVILLE	51	105	1.17	1.24	1731	0.02	1	89	0.06	1.00	573
BELLEVILLE	51	111	4.04	4.33	295	0.96	1.59	148	0.57	1.55	295
BELLEVILLE	51	114	0.04	1	1618	0	0	0	0.00	0.00	0
BELLEVILLE	51	163	4.87	5.07	224	2.74	2.91	217	5.85	6.02	139
BELLEVILLE	51	253	0.73	1	924	2.24	2.52	116	0.00	0.00	0
BLOOMINGTON	31	211	4.54	4.67	362	1.43	2.08	116	3.25	3.48	325
BLOOMINGTON	31	215	4.58	4.69	431	1.03	1.43	84	1.85	2.07	422
BLOOMINGTON	31	217	1.5	1.62	1054	0.4	1.99	147	1.38	1.94	923
GRANITE CITY	64	298	1.1	1.17	1338	0	0	0	0.00	0.00	0
GRANITE CITY	64	322	0.05	1	1084	0.06	1	99	0.11	1.00	143
GRANITE CITY	64	334	0.38	1	1169	1.93	2.53	179	1.68	1.99	450
LASALLE	13	511	5.62	5.85	157	0.4	1.2	212	0.77	1.42	89
MARYVILLE	54	360	9.25	9.36	283	0.81	1.66	163	1.81	1.89	95
MARYVILLE	54	362	1.61	2.12	903	0.29	1.5	104	0.38	1.76	381
MARYVILLE	54	368	5.02	5.38	281	0.34	2.02	105	0.49	1.68	76
MARYVILLE	54	407	4.39	4.63	255	0.66	1.58	169	0.29	1.33	100
MT. VERNON	72	140	5.43	5.74	165	0.93	1.66	140	0.60	1.61	338



#### **Belleville 101**

In 2000, lightning was the predominant cause for high CI and CMI. The remediation plan from lightning analysis called for installation of lightning protection in 2001 on the circuit at a cost of \$3,932 in constant 1998 dollars. This work was completed in September 2001.

# **Belleville 105**

Remediation plans called for change-out of bad poles and crossarms. Corrective maintenance and safety items were completed in 2001 at a cost of \$19,632 in constant 1998 dollars. This circuit was last trimmed in March 2002.

#### **Belleville 111**

Lightning was the major contributor for high CI and CMI. Remediation plans called for installation of lightning protection, replacement of poles and correction of various maintenance and safety items during a circuit patrol at a cost of \$21,517 in constant 1998 dollars. In early 2002, bad poles and crossarms were replaced, additional lightning protection was added and maintenance work was performed at a cost of \$27,457 in constant 1998 dollars. This circuit was trimmed in August 2002. Some poles were C-trussed in 2002 at a cost of \$2,777 in constant 1998 dollars.

#### **Belleville 114**

Remediation plans called for 2001 changing out bad poles, transformers and crossarms along with some identified maintenance items at a cost of \$14,809 in constant 1998 dollars. This circuit was trimmed in May 2002.

#### **Belleville 163**

This circuit was a worst performer mainly due to forestry problems. Tree trimming was started in late 2001 and completed in February 2002. Numerous items found on the circuit patrol were corrected in 2000, which included bad poles and crossarms being replaced and CSP transformers converted at a cost of \$20,573 in constant 1998 dollars. More remedial work was scheduled to be completed in 2002 and included changing out bad poles and crossarms, installing animal guards and converting transformers from CSP's to conventional types. This work was performed at a cost of \$88,992 in constant 1998 dollars.

## **Belleville 253**

Remediation plans identified from the patrol were primarily completed in 2001. Some of these items included replacing bad poles and crossarms and various maintenance items corrected at a cost of \$17,764 in constant 1998 dollars. Additional work performed in 2002 included replacing bad poles and crossarms and installation of additional lightning and animal protection at a cost of \$22,340 in constant 1998 dollars. This circuit was last trimmed in August 2001.



## **Bloomington 211**

Remediation plans identified by the circuit patrol and proactive coordination study were completed in 2001. Work included installing wildlife protectors and fuses at a cost of \$23,344 in constant 1998 dollars. Replacement of underground primary cable was done at a cost of \$18,478 in constant 1998 dollars. This circuit was trimmed in February 2001. As a result of the tree trimming and completion of identified work, the number of wind events has decreased by over 60% and the CMI has decreased by over 90%.

## **Bloomington 215**

Remediation plans identified from a circuit patrol included installation of wildlife protectors, which was completed in 2001 at a cost of \$11,048 in constant 1998 dollars. This circuit was last trimmed in January 2002. Poles were C-trussed in 2002 at a cost of \$2,314 in constant 1998 dollars.

## **Bloomington 217**

Five separate wind events occurred in 2000 on this circuit that caused the inflated CI and CMI. This circuit was last trimmed in January 2002. Mitigation considerations identified in the 2000 annual report were re-evaluated in conjunction with other ongoing efforts. A proactive coordination study on this circuit was completed in 2001 and recommendations were implemented in 2002. Those recommendations consisted of upgrading and installing additional fuses at a cost of \$8,500 in constant 1998 dollars. Poles were C-trussed in 2002 at a cost of \$4,166 in constant 1998 dollars.

#### **Granite City 298**

Work identified from the circuit patrol was completed in 2001 at a cost of \$6,170 in constant 1998 dollars. This circuit was a worst performer due to a storm. This circuit was trimmed in April 1999 and is scheduled to be trimmed in 2003.

## **Granite City 322**

Along with the circuit patrol, a reliability analysis was performed and no additional action was required. This circuit was last trimmed in March 2002.

#### **Granite City 334**

Two sets of fuses were installed in 2001 at a cost of \$1,137 in constant 1998 dollars. This circuit was last trimmed in January 2002.

#### LaSalle 511

This circuit was a worst performer from both the SAIFI and CAIFI perspective with wind and lightning representing the major causes. Upon further review of identified work from the 2000 circuit patrol, a decision was made to replace poles and crossarms instead of installing fuses throughout the circuit. The cost of this work was \$90,922 in 1998 dollars.



As a result of this work, SAIFI and CAIFI were substantially reduced in 2001. This circuit was last trimmed in May 2001.

## Maryville 360

A proactive coordination study was completed in 2001 with recommendations to be implemented in 2002. These recommendations consisted of replacing fuses and upgrading OCR's at a cost of \$15,905 in constant 1998 dollars. Additional work scheduled for 2002 consisted of replacing and C-trussing bad poles, installing fuses and animal guarding the entire circuit was completed at a cost of \$43,475 in constant 1998 dollars. This circuit was trimmed in June 2000.

## Maryville 362

A proactive coordination study was completed in 2001. Recommendations were implemented in 2001 and early 2002 that upgraded or added fuses at a cost of \$775 in constant 1998 dollars. This circuit was last trimmed in March 2001.

## Maryville 368

In 1999, IP replaced a bad pole and crossarm and disconnects with 600 Amp "underslung" blades at a cost of \$1,043 in constant 1998 dollars. During 2000, several projects were performed that rebuilt two spans of 1/0 spacer cable to open wire and replaced bad poles, repaired maintenance items, and removed unused dead blades at a cost of \$27,320 in constant 1998 dollars. In addition to work completed in 2000, the replacement of bad poles and crossarms and installation of a fuse and C-trussing of poles were completed in 2002 at a cost of \$22,107 in constant 1998 dollars. This circuit was last trimmed in October 2002.

## Maryville 407

During 2000, failed underground primary was replaced and a set of reclosers was upgraded at a cost of \$6,645 in constant 1998 dollars. Remediation plans were completed in 2001 that consisted of replacing bad poles, replacing bad disconnects and correcting various maintenance items identified during a circuit patrol at a cost of \$10,900 in constant 1998 dollars. Additional work to replace or C-truss bad poles on this circuit was completed in 2002 at a cost of \$19,684 in constant 1998 dollars. Also completed in 2002, as part of a new 34.5 kV extension, poles were changed out and over 5000' of the circuit feeder was reconductored as an underbuild to the 34.5 kV line. This circuit was last trimmed in September 2001.

## Mt. Vernon 140

Along with work identified, several bad poles were changed out, fuses were installed and additional lightning protection was added in 2002 at a cost of \$45,197 in constant 1998 dollars. This circuit was last trimmed in June 2002.



K) Commencing June 10, 2001, tables or graphical representations, covering for the last three years all of the jurisdictional entity's customers and showing, in ascending order, the total number of customers that experienced a set number of interruptions during the year (i.e., the number of customers who experienced zero interruptions, the number of customers who experienced one interruption, etc.).

For this representation, IP considered the total number of customers served. All interruptions were greater than one minute in duration. This data slice has not been adjusted for exclusions.

Table 30 Exhibit 411.120 K

Customers							
Interruption	Cusion	IIICIS	L				
Level	2002	2001	2000				
0	245,633	228,055	196,680				
1	167,046	154,707	138,123				
2	93,828	102,720	108,529				
3	45,826	55,478	61,862				
4	23,822	26,342	38,743				
5	9,762	11,897	22,613				
6	4,093	6,737	9,645				
7	1,440	2,287	4,313				
8	879	896	3,208				
9	189	261	2,139				
10	182	123	1,042				
11 to 15	41	65	1,377				
16 to 20	0	0	14				
21 to 25	0	0	0				
26 to 30	0	0	0				
Over 30	0	0	0				
Total	592,741	589,568	588,288				

L) Commencing June 10, 2001, for those customers who experienced interruptions in excess of the service reliability targets, a list of every customer, identified by a unique number assigned by the jurisdictional entity and not the customer's name or account number, the number of interruptions and interruption duration experienced in each of the three preceding years, and the number of consecutive years in which the customer has experienced interruptions in excess of the service reliability targets.



No IP customers exceeded the service reliability targets in each of the preceding three years (i.e., 2000-2002).

M) The name, address and telephone number of a jurisdictional entity representative who can be contacted for additional information regarding the annual report.

Bev Hall Manager – Reliability Programs Illinois Power Company 500 S. 27<sup>th</sup> Street, E-15 Decatur, IL 62521 (217) 475-8410

c) Customer report. A jurisdictional entity shall, upon request made by a customer or the Consumer Services Division of the Commission, provide to the customer and/or the Consumer Services Division, within thirty days after the request, a report on all interruptions that the customer making the request, or subject to the Consumer Service Division's request, has experienced at the customer's current service location during the most recent five calendar years. The report shall identify for each interruption the information specified in Section 411.110(a)(1)(A)-(D). Notwithstanding the provisions of this subsection, a jurisdictional entity is not required to report data pursuant to this Section that Section 411.110(b) does not require a jurisdictional entity to maintain, or which the jurisdictional entity was not required to retain at the time of the interruption. This subsection does not alter the provisions of 83 Ill. Adm. Code 200 and 280 that relate to informal and formal complaint procedures.



## **SECTION 411.130 INTERRUPTION CAUSE CATEGORIES**

# **Section 411.130 Interruption Cause Categories**

In adhering to the interruption record-keeping and reporting requirements set forth in this Part, each jurisdictional entity shall classify and report on the cause of each interruption using the cause categories and interruption code descriptions given in Table A of this Part.

Table 31 Exhibit 411.130 - Summary of 2002 Interruptions by Cause Category

Cause Category	Customer Minutes Interrupted	Customers Interrupted	Events
ARES/Other Total Utility	1,905,693	14,344	38
Customer	336,774	3,394	130
Forestry	5,926,226	36,093	1,410
Intentional	9,087,456	109,720	3,701
Jurisdictional Entity/Contractor	507,161	13,971	198
OH Equipment Related	12,684,025	105,425	3,836
Other	484,675	4,286	122
Public	5,211,380	50,227	1,088
Transmission & Substation Equipment	6,215,677	66,635	160
UG Equipment Related	4,258,598	22,570	1,221
Unknown	1,187,958	14,342	224
Weather	68,161,944	276,973	4,644
Wildlife	8,749,683	91,412	2,846
Total	124,717,250	809,392	19,618

# ILLINOIS POWER

## **SECTION 411.140 RELIABILITY REVIEW**

# Section 411.140 Reliability Review

- a) Beginning in the year 1999 and at least every three years thereafter, the Commission shall assess the annual report of each jurisdictional entity and evaluate its reliability performance. Within thirty days after receiving the Commission's final report on such assessment, the jurisdictional entity may prepare a response to such report. Both the Commission's final report and the jurisdictional entity's response shall be filed with the Chief Clerk of the Commission.
  - 1) The Commission recognizes that circumstances and events beyond a jurisdictional entity's control can affect reliability statistics and the interruptions experienced by customers. The Commission shall consider such circumstances and events when evaluating a jurisdictional entity's reliability performance.
  - 2) The Commission evaluation shall:
    - A) Assess the jurisdictional entity's historical performance relative to established reliability targets.
    - B) Identify trends in the jurisdictional entity's reliability performance.
    - C) Evaluate the jurisdictional entity's plan to maintain or improve reliability.
    - D) Include specific identification, assessment, and recommendations pertaining to any potential reliability problems and risks that the Commission has identified as a result of its evaluation.
    - E) Include a review of the jurisdictional entity's implementation of its plan for the previous reporting period.
- b) Annual report assessment and reliability performance evaluation criteria.
  - When assessing a jurisdictional entity's annual report, the Commission shall consider the information listed below.
    - A) Information that this Part requires a jurisdictional entity to include in annual reports.
    - B) The relevant characteristics of the area served, including but not limited to system configuration, population density, and geographical constraints.
    - C) The age and condition of the system's equipment and facilities.
    - D) Generally accepted engineering practices.
    - E) The costs of potential actions.
    - F) The benefits of avoiding the risks of service disruptions.



## **SECTION 411.140 RELIABILITY REVIEW**

- G) The reliability effects of severe weather events and other events and circumstances that may be beyond the jurisdictional entity's control.
- 2) Criteria for Commission assessment of a jurisdictional entity's annual report.
  - A) The report must comply with the requirements of this Part.
  - B) The report must contain a plan, as required by Section 411.120(b)(3)(A).
- 3) When assessing a jurisdictional entity's reliability performance, the Commission shall consider the information listed below.
  - A) Controllable interruptions.
  - B) Statistical measures of interruptions.
  - C) The number of interruptions experienced by individual customers.
  - D) The cumulative hours of interruption experienced by individual customers.
  - E) The jurisdictional entity's actions to prevent interruptions.
  - F) The jurisdictional entity's responses to interruptions and to the customers affected by interruptions.
  - G) The extent to which the jurisdictional entity has restored interruptions of service to customers on a non-discriminatory basis without regard to whether a customer has chosen the jurisdictional entity or another provider of electric power and energy.
  - H) The number and substance of informal inquiries, requests for assistance, and complaints directed by customers to the jurisdictional entity and to the Commission.
  - I) The results of customer satisfaction surveys that include customer perceptions of service reliability.
  - J) Generally accepted engineering practices.
  - K) The costs of potential actions.
  - L) The benefits of avoiding the risks of service disruptions.
  - M) The reliability effects of severe weather events and other events and circumstances that may be beyond the jurisdictional entity's control.
  - N) Previous Commission reports and the jurisdictional entity's responses to those reports.



#### **SECTION 411.140 RELIABILITY REVIEW**

- O) Information that this Part requires a jurisdictional entity to include in annual reports.
- P) The relevant characteristics of the area served, including but not limited to system configuration, population density, and geographical constraints.
- Q) The age and condition of the system's equipment and facilities.
- 4) The jurisdictional entity shall strive to provide electric service to its customers that complies with the targets listed below.
  - A) Customers whose immediate primary source of service operates at 69,000 volts or above should not have experienced:
    - i) More than three controllable interruptions in each of the last three consecutive years.
    - ii) More than nine hours of total interruption duration due to controllable interruptions in each of the last three consecutive years.
  - B) Customers whose immediate primary source of service operates at more than 15,000 volts, but less than 69,000 volts, should not have experienced:
    - i) More than four controllable interruptions in each of the last three consecutive years.
    - ii) More than twelve hours of total interruption duration due to controllable interruptions in each of the last three consecutive years.
  - C) Customers whose immediate primary source of service operates at 15,000 volts or below should not have experienced:
    - i) More than six controllable interruptions in each of the last three consecutive years.
    - ii) More than eighteen hours of total interruption duration due to controllable interruptions in each of the last three consecutive years.
  - D) Exceeding the service reliability targets is not, in and of itself, an indication of unreliable service, nor does it constitute a violation of the Act or any Commission order, rule, direction, or requirement. The Commission's assessment shall determine if the jurisdictional entity has a process in place to identify, analyze, and correct service reliability for customers who experience a number or duration of interruptions that exceeds the targets.

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## **SECTION 411.150 MODIFICATION OR EXEMPTION**

# **Section 411.150 Modification or Exemption**

- a) Any jurisdictional entity may file an application requesting modification of or exemption from any Section of this Part as such Section applies to the jurisdictional entity filing the application. For good cause shown and upon a showing that such a waiver will not compromise the reliability obligations of the jurisdictional entity, the Commission may grant such a request for modification or exemption, except that the Commission may not grant any modification or exemption of specific requirements stated in Section 16-125 of the Act [220 ILCS 5/16-125]. A petition for exemption or modification shall be filed pursuant to 83 III. Adm. Code 200 and shall set forth specific reasons and facts in support of the requested exemption or modification.
- b) In determining whether good cause has been shown, the Commission shall consider, among other things, the information listed below.
  - 1) The extent to which circumstances beyond the control of the jurisdictional entity have made compliance with the applicable Section extremely difficult.
  - 2) Whether the jurisdictional entity has made a good faith effort to comply with the applicable Section in a timely fashion.
  - 3) Whether other information, which the jurisdictional entity would provide if the waiver is granted, permits the Commission Staff to review the subject filing in a complete, timely and meaningful manner.



## **SECTION 411.160 FORMAT AND DISCLOSURE OF REPORTS**

# **Section 411.160 Format and Disclosure of Reports**

The reports required to be filed by this Part shall be submitted to the Commission and available to the public in both printed and electronic form. The printed version shall be the official version filed with the Commission's Chief Clerk. Computerized data and information filed as part of a report that is stored by a jurisdictional entity on a personal computer shall be provided in Microsoft Office or Corel Office, IBM personal computer compatible file formats and delivered to the Commission's offices via Internet electronic mail or on floppy disks or other portable storage media as agreed to by the Commission Staff. Underlying data provided to the Commission shall be available to the public to the extent that it is not proprietary information. A jurisdictional entity shall report the required information on both a system-wide and operating areas basis. A jurisdictional entity shall submit the required information in a consistent format each year that facilitates comparisons across time periods and that uses non-technical language. A jurisdictional entity's reports shall be available to the public from the jurisdictional entity and from the Commission. A jurisdictional entity shall keep copies of its reports at its public offices.

## **SECTION 411.170 EXCLUSIONS**



# **Section 411.170 Exclusions**

The service reliability targets in this Part shall not apply to customers served under a Commission approved tariff or contract, or contract for competitive services as defined in Section 16-102 of the Act [220 ILCS 5/16-102], that specifies levels of service reliability different from the service reliability targets in this Part.

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## **SECTION 411.180 SYSTEM PROTECTION**

# **Section 411.180 System Protection**

- a) In the event that the equipment or facilities of a customer or other entity are being operated in a manner that is inconsistent with the jurisdictional entity's tariffs, terms and conditions of service, or any contract between the jurisdictional entity and the customer or other entity, and such operation poses, in the reasonable judgment of the jurisdictional entity, an imminent threat to the reliability of service to customers or to person or property, the jurisdictional entity shall have the right, but not the obligation, to immediately discontinue service to those points of service that supply power or energy to such equipment or facilities until such time as the threat can be eliminated and service restored. The jurisdictional entity shall give as much notice of such discontinuance of service as is reasonably possible to the affected customer. Temporary discontinuance of service pursuant to this Section shall be deemed to be in compliance with 83 III. Adm. Code 280.130(k).
- b) Notwithstanding anything in the rules of the Commission to the contrary, a jurisdictional entity may lawfully take such actions as are required by federal law or standards adopted under federal law, or by an organization authorized by federal authority, to protect the security of the bulk power system and/or to provide for the continuous supply of power to facilities regulated under federal law.

# **SECTION 411.190 APPROVAL OF VEGETATION MANAGEMENT PROGRAMS**

# **Section 411.190 Approval of Vegetation Management Programs**

A jurisdictional entity may file with the Commission tariffs describing programs and practices for the control of vegetation designed to maintain or enhance service reliability. Such tariffs, if passed to file or accepted after hearing, shall be deemed standards of the Commission with respect to vegetation management by such jurisdictional entity and shall pre-empt contrary ordinances, rules, and actions of units of local government. A jurisdictional entity will provide notice to municipalities and counties directly affected thereby of the filing, under this Section, of a proposed tariff or supporting materials relating to the need for such a tariff.